

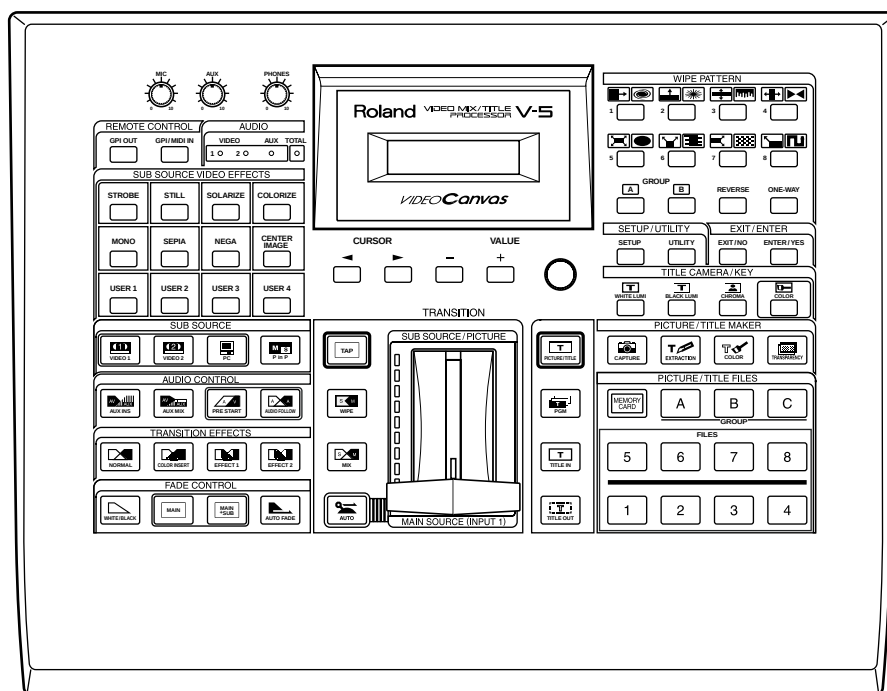
VIDEO MIX/TITLE PROCESSOR V-5

VIDEOCanvas

Owner's Manual

Before using this unit, carefully read the sections entitled: "IMPORTANT SAFETY INSTRUCTIONS" (p. 2), "USING THE UNIT SAFELY" (p. 3), and "IMPORTANT NOTES" (p. 4). These sections provide important information concerning the proper operation of the unit. Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new unit, this manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.

The Roland V-5 NTSC is designed for use exclusively with NTSC (National Television System Committee) standard video signals. The Roland V-5 PAL can likewise only be used with PAL (phase-alternation by line) standard video signals.





CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



ATTENTION: RISQUE DE CHOC ELECTRIQUE NE PAS OUVRIR

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS.

IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

WARNING - When using electric products, basic precautions should always be followed, including the following:

1. Read all the instructions before using the product.
 2. Do not use this product near water — for example, near a bathtub, washbowl, kitchen sink, in a wet basement, or near a swimming pool, or the like.
 3. This product should be used only with a cart or stand that is recommended by the manufacturer.
 4. This product, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.
 5. The product should be located so that its location or position does not interfere with its proper ventilation.
 6. The product should be located away from heat sources such as radiators, heat registers, or other products that produce heat.
 7. The product should be connected to a power supply only of the type described in the operating instructions or as marked on the product.
 8. The power-supply cord of the product should be unplugged from the outlet when left unused for a long period of time.
 9. Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
 10. The product should be serviced by qualified service personnel when:
 - A. The power-supply cord or the plug has been damaged; or
 - B. Objects have fallen, or liquid has been spilled into the product; or
 - C. The product has been exposed to rain; or
 - D. The product does not appear to operate normally or exhibits a marked change in performance; or
 - E. The product has been dropped, or the enclosure damaged.
 11. Do not attempt to service the product beyond that described in the user-maintenance instructions. All other servicing should be referred to qualified service personnel.
- **Replacement Parts**—When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
 - **Safety Check**—Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

For the USA

GROUNDING INSTRUCTIONS

This product must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock.

This product is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

DANGER: Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the product is properly grounded. Do not modify the plug provided with the product — if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

For the U.K.

WARNING: THIS APPARATUS MUST BE EARTHED

IMPORTANT: THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.
GREEN-AND-YELLOW: EARTH, BLUE: NEUTRAL, BROWN: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol  or coloured GREEN or GREEN-AND-YELLOW.

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

The product which is equipped with a THREE WIRE GROUNDING TYPE LINE PLUG must be grounded.

USING THE UNIT SAFELY

INSTRUCTIONS FOR THE PREVENTION OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

About ⚠ WARNING and ⚠ CAUTION Notices

⚠ WARNING	Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.
⚠ CAUTION	Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly. * Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets.

About the Symbols

	The ⚠ symbol alerts the user to important instructions or warnings. The specific meaning of the symbol is determined by the design contained within the triangle. In the case of the symbol at left, it is used for general cautions, warnings, or alerts to danger.
	The ⚡ symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the unit must never be disassembled.
	The ● symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the power-cord plug must be unplugged from the outlet.

ALWAYS OBSERVE THE FOLLOWING

⚠ WARNING

- Before using this unit, make sure to read the instructions below, and the Owner's Manual. 
- Do not open or perform any internal modifications on the unit. 
- Make sure you always have the unit placed so it is level and sure to remain stable. Never place it on stands that could wobble, or on inclined surfaces. 
- Avoid damaging the power cord. Do not bend it excessively, step on it, place heavy objects on it, etc. A damaged cord can easily become a shock or fire hazard. Never use a power cord after it has been damaged. 
- In households with small children, an adult should provide supervision until the child is capable of following all the rules essential for the safe operation of the unit. 
- Protect the unit from strong impact. (Do not drop it!) 
- Do not force the unit's power-supply cord to share an outlet with an unreasonable number of other devices. Be especially careful when using extension cords—the total power used by all devices you have connected to the extension cord's outlet must never exceed the power rating (watts/amperes) for the extension cord. Excessive loads can cause the insulation on the cord to heat up and eventually melt through. 
- Before using the unit in a foreign country, consult with your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page. 

⚠ WARNING

- A very small percentage of individuals may experience convulsions or loss of consciousness when exposed to certain light patterns or flashing lights on a television screen. If you, or anyone in your family, has ever experienced such a condition, consult your physician prior to using this equipment. If you experience any of the following symptoms during the use of the equipment—dizziness, altered vision, eye or muscle twitches, loss of consciousness, or convulsions—IMMEDIATELY stop using and consult your physician before resuming use. 
- Be sure to avoid light stimuli on video inducing the above symptoms in viewers, when using the equipment to produce your video works.
- In the event that anyone viewing video works produced with this equipment should suffer from these symptoms, IMMEDIATELY make them stop viewing and consult a physician.

⚠ CAUTION

- Always grasp only the plug on the power-supply cord when plugging into, or unplugging from, an outlet or this unit. 
- Try to prevent cords and cables from becoming entangled. Also, all cords and cables should be placed so they are out of the reach of children. 
- Never climb on top of, nor place heavy objects on the unit. 
- Never handle the power cord or its plugs with wet hands when plugging into, or unplugging from, an outlet or this unit. 
- Before moving the unit, disconnect the power plug from the outlet, and pull out all cords from external devices. 
- Before cleaning the unit, turn off the power and unplug the power cord from the outlet (p. 16). 
- Whenever you suspect the possibility of lightning in your area, pull the plug on the power cord out of the outlet. 

Important Notes

In addition to the items listed under “IMPORTANT SAFETY INSTRUCTIONS” and “USING THE UNIT SAFELY” on pages 2 and 3, please read and observe the following:

Power Supply

- Do not use this unit on the same power circuit with any device that will generate line noise (such as an electric motor or variable lighting system).
- Before connecting this unit to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.

Placement

- Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this unit; or move it farther away from the source of interference.
- This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.
- Do not expose the unit to direct sunlight, place it near devices that radiate heat, leave it inside an enclosed vehicle, or otherwise subject it to temperature extremes. Excessive heat can deform or discolor the unit.
- To avoid possible breakdown, do not use the unit in a wet area, such as an area exposed to rain or other moisture.

Maintenance

- For everyday cleaning wipe the unit with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a cloth impregnated with a mild, non-abrasive detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.
- Never use benzine, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

Repairs and Data

- Please be aware that all data contained in the unit's memory may be lost when the unit is sent for repairs. Important data should always be backed up to a memory card (for files and programs), or written down on paper (for the other data, when possible). During repairs, due care is taken to avoid the loss of data. However, in certain cases (such as when circuitry related to memory itself is out of order), we regret that it may not be possible to restore the data, and Roland assumes no liability concerning such loss of data.

Additional Precautions

- Please be aware that the contents of memory can be irretrievably lost as a result of a malfunction, or the improper operation of the unit. To protect yourself against the risk of losing important data, we recommend that you periodically save a backup copy of important data you have stored in the unit's memory or a memory card.
- Unfortunately, it may be impossible to restore the contents of data that was stored in the unit's memory or a memory card once it has been lost. Roland Corporation assumes no liability concerning such loss of data.
- Use a reasonable amount of care when using the unit's buttons, sliders, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions.

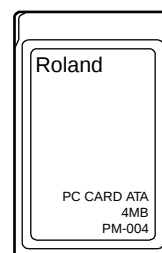
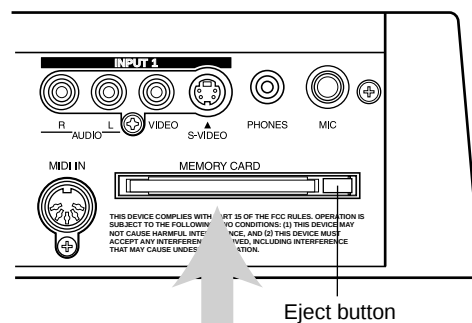
- Never strike or apply strong pressure to the display.
- When connecting/disconnecting all cables, grasp the connector itself—never pull on the cable. This way you will avoid causing shorts, or damage to the cable's internal elements.
- A small amount of heat will radiate from the unit during normal operation.
- To avoid disturbing your neighbors, try to keep the unit's volume at reasonable levels. You may prefer to use headphones, so you do not need to be concerned about those around you (especially when it is late at night).
- When you need to transport the unit, package it in the box (including padding) that it came in, if possible. Otherwise, you will need to use equivalent packaging materials.

Concerning Copyrights and Related Matters

- It is a violation of copyright law to use any materials copyrighted by third parties (video or music from broadcasts, tapes, or disks; printed materials, such as photographs, illustrations, etc.) in works you produce without the permission of the copyright holder, unless your sole purpose is that of private personal enjoyment. Even if a work produced using this system should be found in violation of copyright law, Roland can assume no responsibility whatsoever.
- You must obtain permission from the copyright holder before using copyrighted video or materials for commercial use or for public viewing. However, even though permission for usage of a copyrighted work has been obtained, copyright law does not allow you to alter the content of the material you use (such as by combining multiple images or adding special effects using this equipment) unless specific permission for such changes has also been obtained from the copyright holder.

Using Memory Cards

- Carefully insert the memory card all the way in—until it is firmly in place.



Memory card
Roland PC CARD ATA
PM-004/008/012/020
(optional)

- Never touch the terminals of the memory card. Also, avoid getting the terminals dirty.

Style Conventions Used in This Manual

NOTE or the * mark indicates a key warning or note which should be read carefully.

In this manual, the liquid crystal display in the center of the panel is referred to as the “display”, and the television or video monitor used to view the output video stream is referred to as the “monitor.”

To simplify descriptions of the operation process, the following style conventions are used:

- Groups of buttons with similar functions are referred to as “blocks” on the control panel.
(Ex.) The SUB SOURCE block includes four buttons, namely [VIDEO 1], [VIDEO 2], [PC] and [P in P].
- Expressions enclosed in square brackets [] indicate buttons or knobs on the panel.
(Ex. 1) [AUX] is the AUX control knob.
(Ex. 2) [STILL] is the STILL button, which is located in the SUB SOURCE VIDEO EFFECTS block.
- Expressions in quotation marks “ ” are messages shown on the display.
(Ex.) When the [CAPTURE] button is pressed, “Now Capturing Please Wait...” will be displayed.

The explanations in this manual include illustrations that depict what should typically be shown by the display. Note, however, that your unit may incorporate a newer, enhanced version of the system (e.g., includes settings), so what you actually see in the display may not always match what appears in the manual.

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Features of the V-5 VIDEO MIX/TITLE PROCESSOR

The V-5 VIDEO MIX/TITLE PROCESSOR provides the following functions for use with high-quality digital video.

- Video mixer functions, making it possible to switch (transition) between two video streams.
- Still image filing functions, which make it possible to capture multiple still images from sources such as video shooting of photographs or pamphlets and even personal computer graphics, store them to memory, and combine them with video imagery.
- Title functions, so that printed and even handwritten characters can be captured and embellished for use.

(1) Stand-alone video mixer designed for operability

All the processing required for editing multiple video sources is integrated into this single unit, including transitions, effects, fades and titling. A professional-grade video fader, like those already extensively used in the industry, is provided for transitions, and ease in use is stressed through clear design, self-illuminating buttons, and obvious icon displays.

● Switching between four SUB SOURCE inputs

Any of four SUB SOURCE inputs (VIDEO 1, VIDEO 2, PC, PICTURE/TITLE file) can be selected for the specific need, with a mix or wipe transition from the MAIN SOURCE (INPUT 1).

● Rich selection of transitions

Two video streams can be mixed, wiped or faded for transition, and special effects such as COLORIZE or SOLARIZE, or background color insertion can also be used during transition for an extensive range of expression.

● Rich selection of internal wipe patterns

Over 200 wipe patterns provided internally for scene changes, from simple patterns to complex geometrical imagery.

● Picture in picture

A SUB SOURCE image can be reduced in size and inserted into the MAIN SOURCE image. You can specify position, size and border type and color.

● Rich video effects provided

In addition to the eight basic video effects, including STROBE, SEPIA, COLORIZE and CENTER IMAGE, you can select any of over 30 TAP and other preset effects. Four user buttons can be assigned to your favorite effects for instant use.

● Powerful audio mixer

A 4-input audio mixer is provided (INPUT 1, INPUT 2, AUX IN, MIC). Audio source can be switched automatically matched with video fader action, and you have single-button control over mixing and transition between audio tracks on video sources and music input from AUX IN.

(2) High-definition video capability with 560 lines of horizontal resolution, surpassing digital video.

The V-5's horizontal resolution of 560 lines via S-video connection is superior to digital video's of 500 lines (in MAIN SOURCE (INPUT 1)).

(3) Creating diverse titles with still image files, hand-written characters and keying

● Title camera functions (luminance key)

This function is used to combine two video images, replacing the light (or dark) regions of the first video with the other. The text or pictures from a printed pamphlet, for example, can be combined with the video, and text from black-and-white prints can be converted to any color in realtime for use as titles.

● Professional chroma key functions

Image of subject against a blue background can be inserted against the other background video.

● Title creation functions

Printed or handwritten characters shot by camcorder can be captured, and extracted for creating a title. Changing text color, adding edges and adjusting transparency can be applied for brushup.

- **Still image file functions**

Titles, video images and PC graphics can be captured and stored as still images in the system (up to 24 images) for instant call-up at the press of a button.

- **Storage in memory cards**

Still imagery can be stored in memory cards (sold separately) for loading, making it easy to build up and manage an extensive library of title and still images.

(4) Use of PC imagery such as CG and text with video sources

PC imagery can be input, including from notebook PC. Text, CG, animated 2D/3D titles and even animations shown on the PC display can be easily combined with the video stream.

(5) Audio and video sync functions and linkage with other equipment

With an edit controller offering GPI functions, it is possible to display titles in/out, or add visual effects in time with music tempo, for example.

- **GPI input/output**

Offers GPI input and output, making easy linkage with external video equipment possible, such as inserting titles when a GPI signal is output from an edit controller.

- **TAP function**

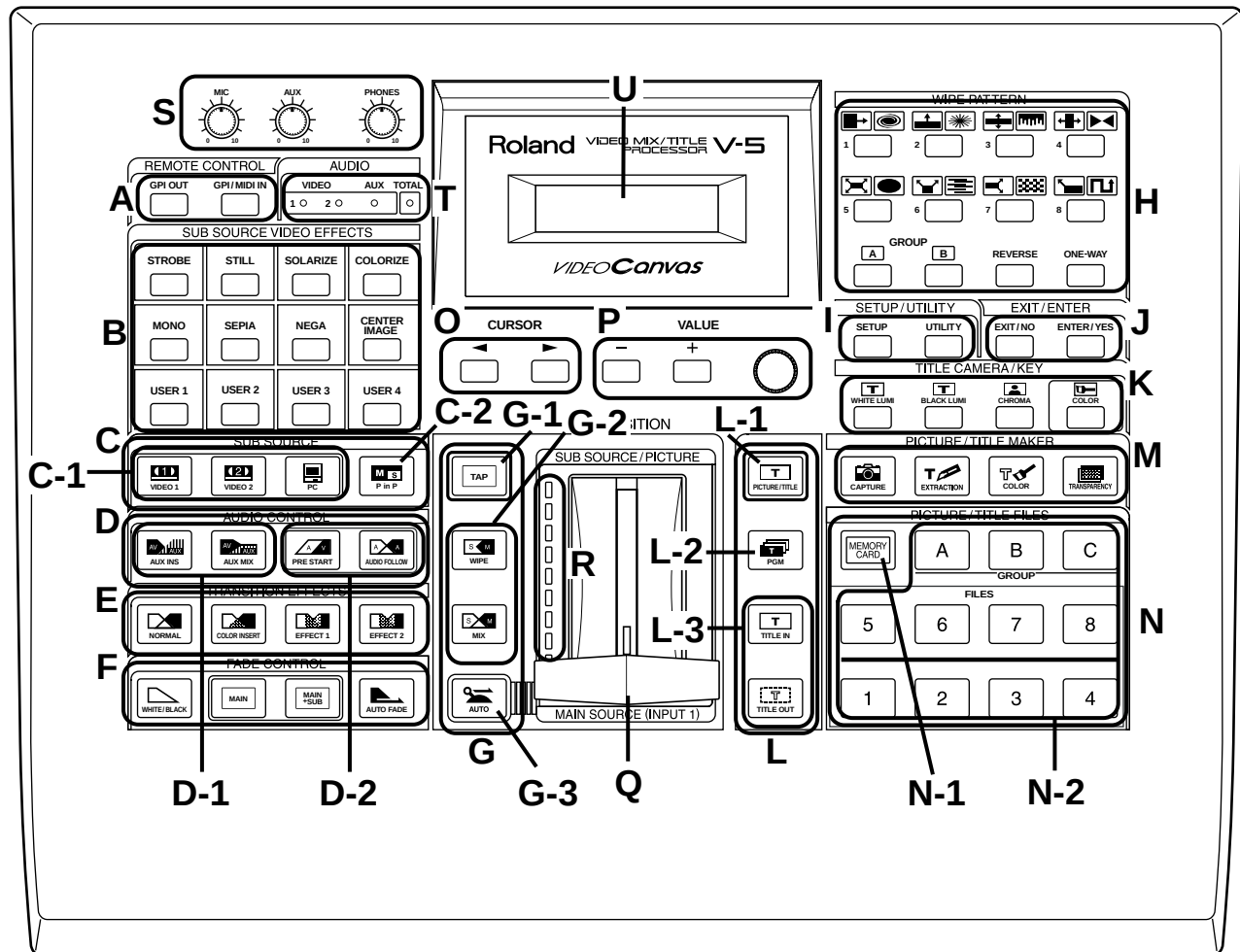
When [TAP] is pressed in time with the music, visual effects such as STROBE and SOLARIZE can be applied in sync with the tempo.

- **MIDI synchronization**

Comes with a MIDI IN jack, making it possible to link visual effects to musical data from a MIDI-capable electronic instrument. Also the V-5 is compatible with MTC (MIDI time code). With the optional SI-80S it is possible to display stored titles in/out at specified video time codes.

Part Names and Functions

Operation Panel



A. REMOTE CONTROL block

[GPI OUT]: Used to output the GPI signal. Controls video editing equipment like titlers, or the A-6 DIGITAL MULTI AUDIO STATION (p. 83).

[GPI/MIDI IN]: Enables remote control via GPI or MIDI signals from other equipment (p. 74, 75).

B. SUB SOURCE VIDEO EFFECTS block

Used to apply special effects to the SUB SOURCE (VIDEO 1, VIDEO 2, PC) or the PICTURE / TITLE image (p. 42, 64, 97).

[STROBE]: The video is captured as a series of still images at a fixed interval.

[STILL]: Freeze-frames video image.

[SOLARIZE]: The brightness levels of the image are reduced for an artistic color addition.

[COLORIZE]: Image is colored depending on brightness.

[MONO]: Converts a color image to monochrome.

[SEPIA]: Converts an image to sepia tone.

[NEGA]: Converts an image to a negative.

[CENTER IMAGE]: Adds mist around the image.

[USER 1] to [USER 4]: Any of the 32 preset effects can be mapped to these user function buttons (p. 67, 98).

C. SUB SOURCE block

C-1

Select one of the following as the video stream to be used as the SUB SOURCE (p. 22).

[VIDEO 1]: Selects the video stream from the equipment connected to INPUT 1.

[VIDEO 2]: Selects the video stream from the equipment connected to INPUT 2.

[PC]: Selects the VGA output signal from the personal computer (PC) connected to TO PC DISPLAY OUT (p. 61).

C-2

[P in P]: Creates a miniature frame inside the MAIN SOURCE, and displays the selected SUB SOURCE inside it. The combined image is output when the video fader is set to the SUB SOURCE side (p. 40, 68).

D. AUDIO CONTROL block

D-1

Used to select the audio output process for the audio equipment connected to AUX IN. The audio signal from AUX IN is output when either button is on or flashing.

[AUX INS]: Audio from sources is muted, and only AUX

IN audio is output (p. 36, 59).

[AUX MIX]: Audio from sources and AUX IN audio are mixed for output (p. 37, 59).

D-2

Used to control the audio signals of MAIN SOURCE and SUB SOURCE independently of video transition.

[PRE START]: The video signal is left untouched, and only the audio signal is crossfaded to the other source (p. 45, 59).

[AUDIO FOLLOW]: When this button is lit, audio changes along with video transition. When the button is not lit, the audio signal will remain unchanged even if the video signal is switched (p. 45, 46, 60).

E. TRANSITION EFFECTS block

Used to insert the SUB SOURCE/PICTURE image with special effects into transition between MAIN SOURCE and SUB SOURCE/PICTURE. Select one of the following (p. 43).

[NORMAL]: No effects added during switching.

[COLOR INSERT]: Adds a single color screen, and then switch to the next video image (p. 44).

[EFFECT 1] [EFFECT 2]: Any of the 12 preset effects can be mapped to these user function buttons (p. 71, 97).

F. FADE CONTROL block

Used to control fade-in and fade-out effects (p. 24).

[WHITE/BLACK]: Selects the color of the faded-out screen. When the button is lit the color is white, and when it turns off the color is black.

[MAIN]: Fades only the MAIN SOURCE, and not the SUB SOURCE.

[MAIN+SUB]: Fades both MAIN SOURCE and SUB SOURCE.

[AUTO FADE]: Executes fade-out and fade-in. Press once during video output to execute fade-out, and again for fade-in.

G. TRANSITION block

G-1

[TAP]: Stores the interval between button taps, and applies the effect to the SUB SOURCE at that interval. Tap effects are enabled when they are mapped to user function buttons [USER 1] to [USER 4] and selected as SUB SOURCE VIDEO EFFECTS (p. 67).

G-2

Selects the method of transition between MAIN SOURCE and SUB SOURCE/PICTURE. Either WIPE or MIX is always enabled (p. 38).

[WIPE]: The boundary between two images slides to “wipe” away one image while bringing on the other.

[MIX]: Overlapping two images and gradually dissolving one image to the other.

G-3

[AUTO]: Transition, wipe or mix, is handled automatically. The result is the same as moving the video fader manually to the other side (p. 23).

H. WIPE PATTERN block

Selects the wipe pattern (p. 39).

Pattern numbers [1] to [8], GROUP [A] and [B]: Specifies the WIPE PATTERN by group and number. The A group is indicated by the black icon, and the B group by the blue icon on the panel. Any of the internal patterns (A group: 9, B group: 254) can be mapped to these pattern buttons (p. 71).

[REVERSE]: Wipe direction is reversed.

[ONE-WAY]: The wipe direction remains the same regardless of video fader operation.

I. SETUP/UTILITY block

[SETUP]: Press to enter the button function set-up mode. Press again to return to normal system operation.

[UTILITY]: Press to set other functions, and press again to return to normal system operation.

J. EXIT/ENTER block

[EXIT/NO]: Cancels the setup operation in progress. If [SETUP] or [UTILITY] has been pressed, [EXIT/NO] returns the system to normal operation.

[ENTER/YES]: Executes function select or data handling such as saving or modifying.

K. TITLE CAMERA/KEY block

Selects the method of combining the MAIN SOURCE with the SUB SOURCE or PICTURE/TITLE image to create a composite image. The composite image is output when the video fader is set to the SUB SOURCE side (p. 30).

[WHITE LUMI]: Replaces the white regions of the SUB SOURCE or PICTURE/TITLE image with the MAIN SOURCE.

[BLACK LUMI]: Replaces the black regions of the SUB SOURCE or PICTURE/TITLE image with the MAIN SOURCE.

[CHROMA]: Replaces the blue regions of the SUB SOURCE or PICTURE/TITLE image with the MAIN SOURCE (p. 70).

[COLOR]: Converts the SUB SOURCE or PICTURE/TITLE image portions left in the composite image into a single color image (p. 34).

L. TITLE block

L-1

[PICTURE/TITLE]: The PICTURE/TITLE file images stored within the equipment or in a memory card is output in place of the SUB SOURCE. As with the SUB SOURCE, it can be switched or combined with the MAIN SOURCE. Press the SUB SOURCE button ([VIDEO 1] [VIDEO 2] [PC]) to cancel (p. 29).

L-2

[PGM]: Enables execution of the program specifying the order to output the PICTURE/TITLE file images stored within the equipment or in a memory card. In/out control is handled with [TITLE IN] and [TITLE OUT], GPI

signal or MTC (MIDI time code) (p. 72, 74, 76).

L-3

PICTURE/TITLE image can be inserted into the MAIN SOURCE (in), or deleted (out) (p. 29, 72). This is enabled when [PICTURE/TITLE] is lit and the video fader is set to MAIN SOURCE, or [PGM] is on.

[TITLE IN]: The PICTURE/TITLE file image starts appearing into the MAIN SOURCE.

[TITLE OUT]: The PICTURE/TITLE combined into the MAIN SOURCE starts disappearing.

M. PICTURE/TITLE MAKER block

Captures the SUB SOURCE as a single still image and makes a title from the captured image. It can be stored to the internal memory or memory card for use as a PICTURE/TITLE file (p. 27, 50).

[CAPTURE]: Captures the SUB SOURCE frame shown when the button is pressed as a still image.

[EXTRACTION]: Characters are extracted from the captured image.

[COLOR]: Extracted characters are modified with edges and shadows, and color can be added.

[TRANSPARENCY]: Sets the transparency level for the embellished characters.

N. PICTURE/TITLE FILES block

N-1

[MEMORY CARD]: Selects the memory card for use. Press to load a PICTURE/TITLE file from the memory card, or to store a file to the card (p. 56).

N-2

Specifies the PICTURE/TITLE file.

GROUP [A] to [C], file numbers [1] to [8]: Specify the PICTURE/TITLE file by the combination of group and number.

O. CURSOR block

[◀] [▶]: When ◀ and ▶ are shown in the corners of the display, switches to another page in the display.

P. VALUE block

Used to make and change settings.

[+]: Increases the value.

[-]: Decreases the value.

[Value dial]: Rotate clockwise to continuously increase the value, and counter-clockwise to decrease it. If the dial is rotated while the [+] or [-] button is depressed, the value will change in units of 10 instead of units of 1.

Q. Video fader

Manually controls transition between the MAIN SOURCE (INPUT 1) and the SUB SOURCE/PICTURE. When the fader is at the bottom of its slot the MAIN SOURCE is output, and when at the top end closer to the display the SUB SOURCE is output. In an intermediate position the two images will be combined.

R. Transition indicator

Indicates the transition state between the MAIN SOURCE (INPUT 1) and the SUB SOURCE/PICTURE.

S. Volume adjustment block

[MIC]: Adjusts the microphone volume (p. 37).

[AUX]: Adjusts the AUX IN volume (p. 36).

[PHONES]: Adjusts the headphones volume (p. 36).

T. AUDIO block

Indicates audio signal states of VIDEO 1, VIDEO 2, AUX IN and TOTAL output, via flashing, steady lit, and off indicators.

On: Maximum output volume.

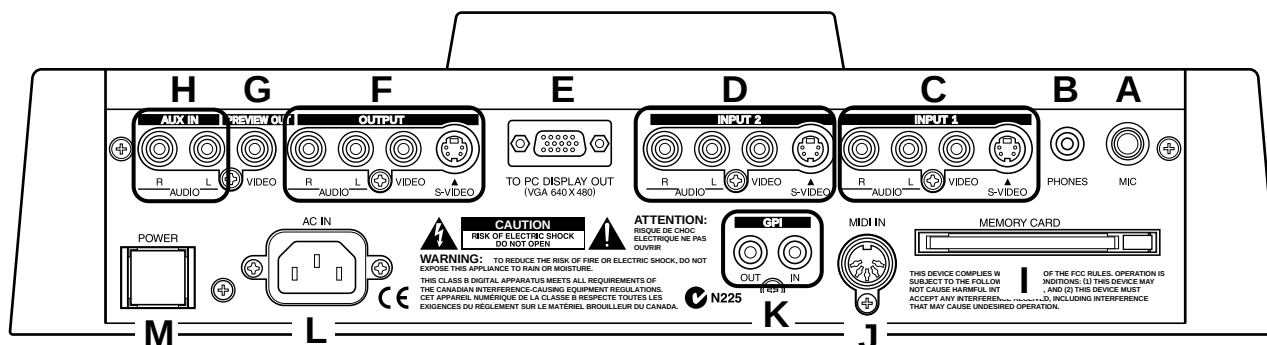
Flashing: Output at reduced volume.

Off: No audio output.

U. Display

Shows the current equipment status, adjustment and setting items, and set values.

Rear Panel



A. MIC jack

Connect an optional microphone.

B. PHONES jack

Connect optional headphones.

C. INPUT 1

D. INPUT 2

Input the audio and video signals to be edited from the source VCR.

S-VIDEO connector: Connect to the S-VIDEO output connector on the video equipment.

VIDEO jack: Connect to the composite video output jack (yellow) on the video equipment.

AUDIO jacks (R, L): Connect to the audio output jacks on the video equipment. Red is right, white is left.

E. TO PC DISPLAY OUT connector

Connect to a personal computer VGA output connector (display connector). The input signal should be VGA-equivalent 640 x 480 dots with a 60 Hz refresh rate, or 640 x 400 dots with a 53 Hz refresh rate (p. 61).

F. OUTPUT

Outputs audio and video streams to the recording VCR, monitor, etc.

S-VIDEO connector: Connect to the S-VIDEO input connector on the video equipment or the monitor.

VIDEO jack: Connect to the composite video input jack (yellow) on the video equipment or the monitor.

AUDIO jacks (R, L): Connect to the audio input jacks on the video equipment or the monitor. Red is right, white is left.

G. PREVIEW OUT jack

The video signal which is not being output through the OUTPUT jack by transition (the other source opposite from the video fader position) is output. If a monitor is connected, it is possible to check the next video signal to be output before the transition (p. 91).

H. AUX IN jacks (R, L)

Connect to the OUTPUT jacks of audio equipment, such as CD player. Red is right, white is left.

I. MEMORY CARD slot

Insert the optional memory card (Roland PC CARD ATA PM-004/008/012/020). Used to store PICTURE/TITLE files and programs (p. 56, 72).

J. MIDI IN connector

Connect to the MIDI OUT connector on external MIDI equipment, to receive MIDI messages (p. 75). MIDI messages can be used to control programmed PICTURE/TITLE file in/out operations, tap interval by song tempo, and panel button on/off.

K. GPI IN/OUT

IN jack: Connect to the GPI OUT jack of external video editing equipment, such as editing controllers. Can be used to control programmed PICTURE/TITLE file in/out operations from external equipment (p. 74).

OUT jack: Connect to the GPI IN jack of titlers and other external video editing equipment, or the A-6 DIGITAL MULTI AUDIO STATION. When [GPI OUT] is pressed, the transmitted GPI signal can be used to control other equipment (p. 83).

L. AC IN (AC receptacle)

Plug the provided power cord in here.

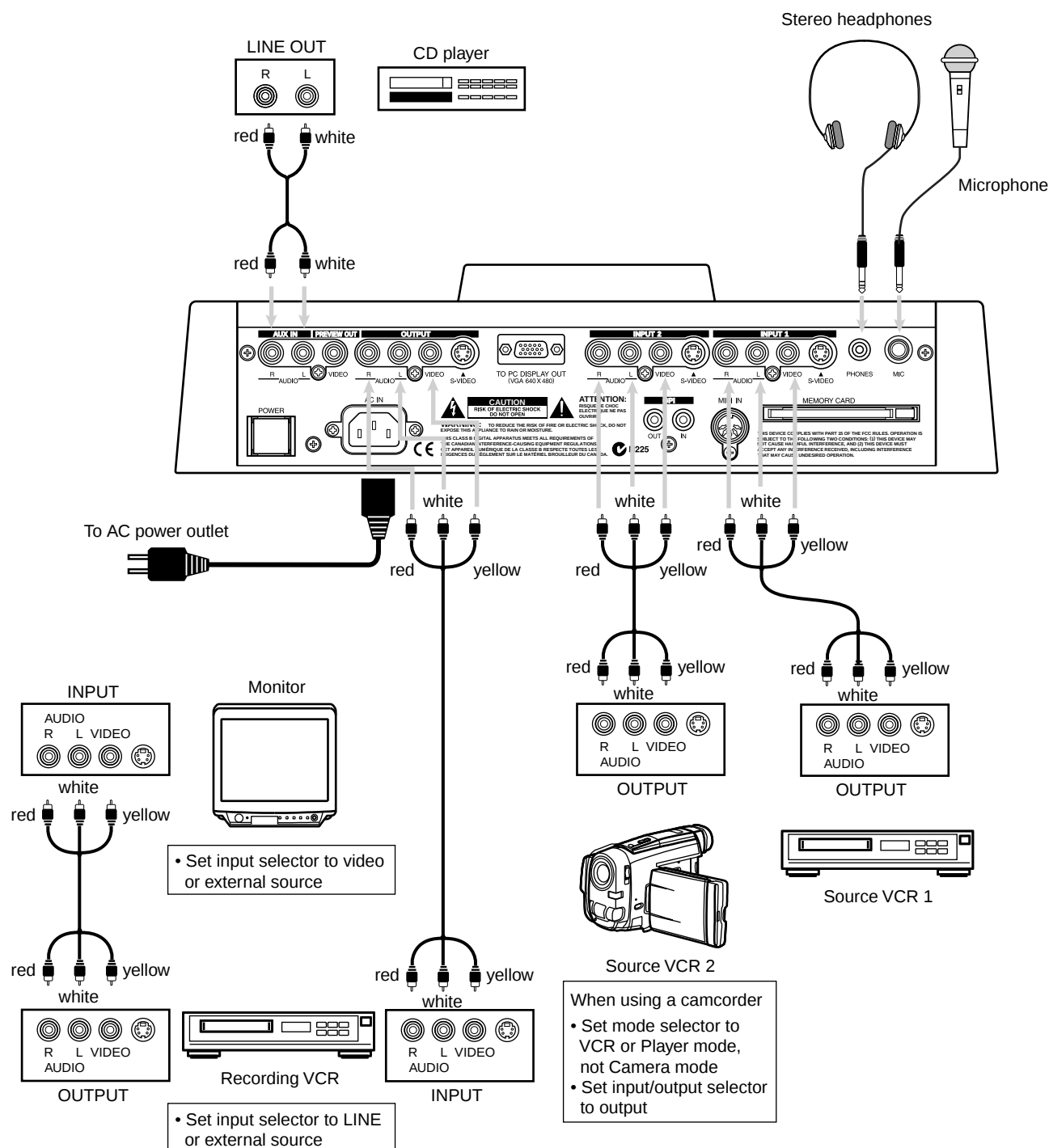
M. POWER switch

Push the switch to turn equipment power on and off. When the switch is depressed, the equipment power is on.

Basic Connection

NOTE

To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.



NOTE

Connection cables are not supplied with this equipment. Please use commercially-available audio and video cables. Use video cables to connect the video jacks.

NOTE

We recommend that you connect your source VCRs and recording VCR using their S-video connectors, provided all VCRs are equipped with them. That way, you will obtain a higher quality image than you can get using the composite video jacks (yellow). In this case, connect all the decks with the S-video connectors. Avoid using the composite video jacks (yellow) together with the S-video connectors.

NOTE

If the source VCR provides an edit switch, turn it on. This will reduce image degradation during video editing.

NOTE

Be sure that the equipment connected to INPUT 1 supplies a stable sync signal. Unless a stable signal is supplied to INPUT 1, the output video may suffer from jitter, distortion or color shift.

<Equipment capable of supplying stable sync signals>

- Video equipment with internal TBC (time base correctors)
- Laser disc players
- Digital video cameras/camcorders
- Output from live video cameras, etc.

NOTE

Stable video may not be obtainable from a number of video game systems.

NOTE

We recommend the use of a recording VCR with an FE (flying erase) head. Without an FE head, a pause in recording may cause video noise.

NOTE

Even when the video equipment can use battery packs, power all equipment from commercial AC power through an adaptor. If the battery pack should fail during editing, the editing process will be interrupted.

Turning the Power On

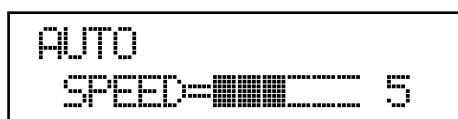
NOTE

Turn on power to your various devices in the order specified below. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and other devices.

Always make sure to have the volume level turned down before switching on power. Even with the volume all the way down, you may still hear some sound when the power is switched on, but this is normal, and does not indicate a malfunction.

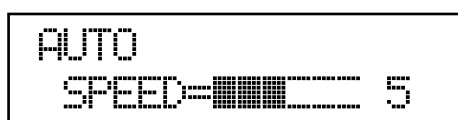
1. Verify the connections (p. 14).
2. Rotate the [MIC], [AUX] and [PHONES] fully counter-clockwise to the 0 position.
3. Turn on the power to all connected video equipment, televisions, etc.
4. Turn the volume of the recording VCR and the TV monitor to the lowest setting.
5. Press the power switch on the rear panel.

The display light will go on. Messages will be shown on the display for about one minute, and then change to the one shown below, at the same time buttons will also light. Operation will be then possible.



Turning the Power Off

1. Check that the [SETUP] and [UTILITY] lights in the SETUP/UTILITY block are off, and that the following message is shown on the display.



2. Turn the volume of the recording VCR and the TV monitor to the lowest setting.
3. Press the power switch.
The display and buttons will go out, and the power will be turned off.
4. Turn off the power for the connected video equipment and televisions.

NOTE

Always check step 1. before turning off the power. Take special care to avoid turning off the power while setting the equipment configuration with the [SETUP] or [UTILITY] buttons.

Basic Editing Operations

This chapter describes the basic functions and operation of the V-5, which are essential in video editing work.

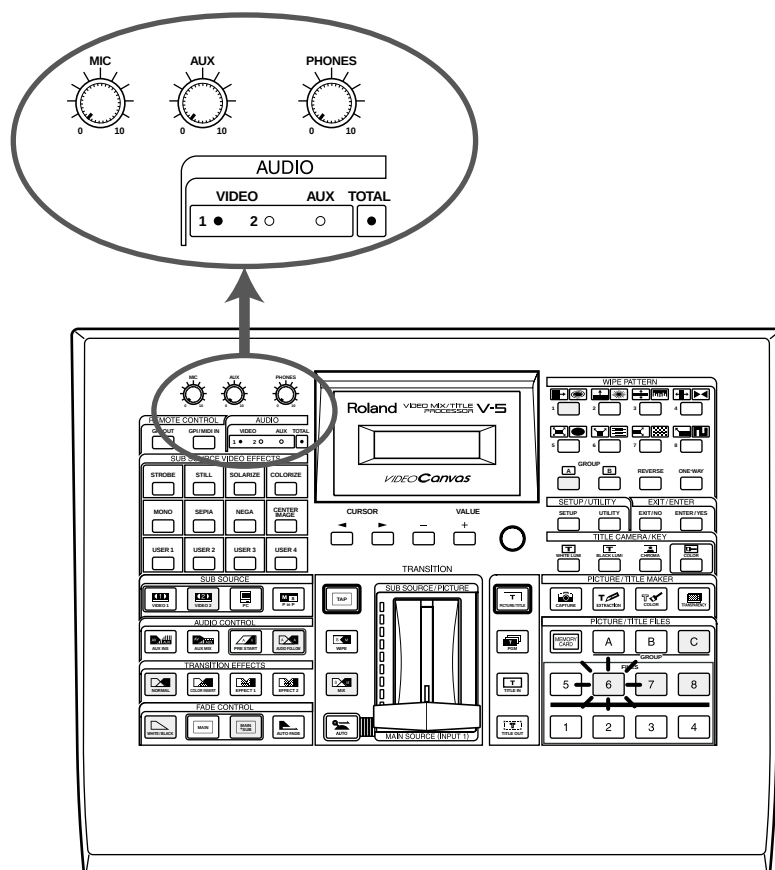
Basic Settings

Before beginning video editing be sure to check the status of the V-5:

1. Set the video fader to the MAIN SOURCE (INPUT 1) side.
2. Check the settings by comparing the state of the buttons to the basic settings shown in the following diagram.

NOTE

In the PICTURE/TITLE FILES block the locations of lighting or flashing buttons may vary according to stored files. (The following diagram shows the factory default settings.)



When the button state matches that shown above, adjust the display contrast as specified on page 19.

The equipment will be in this state immediately after power is turned on.

When a button is on or flashing it indicates that the corresponding function is active. In the PICTURE/TITLE FILES block a lighting button indicates the file a still image is stored in and flashing indicates the selected file.

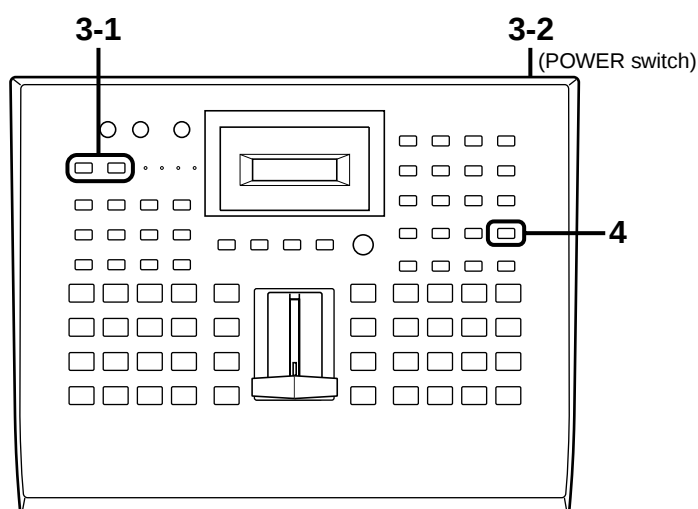
● If different buttons are lit:

1. Turn off the power as specified on page 16.
2. Turn the power back on as specified on page 16.
3. Check the button state against the diagram again.

Return to Basic Settings (Factory Reset)

NOTE

This operation will return all settings and adjustment results to the factory default settings, and clear all PICTURE/TITLE files and programs. If you do not want to miss your settings, files or programs, DO NOT perform Factory Reset. When performing this operation, be sure to write down any settings you require first, and then set them again after finishing factory reset. PICTURE/TITLE files and programs should be copied to a memory card for storage.



1. Turn off the power as specified on page 16.
2. Prepare to turn the power back on, as specified in steps 1 to 4 on page 16.
3. Hold down the [GPI OUT] and [GPI/MIDI IN] in the REMOTE CONTROL block, and press the POWER switch.

After the initial message, the display will show the screen indicated below.

FACTORY RESET
Press [ENTER]

4. Press [ENTER/YES] in the EXIT/ENTER block.

The display will change, and factory reset will start.

When the display changes to the one shown below, factory reset is complete.

FACTORY RESET
Complete.

After the display shows the same messages as you see when you turn the power on for about a minute, the basic settings will be set automatically.

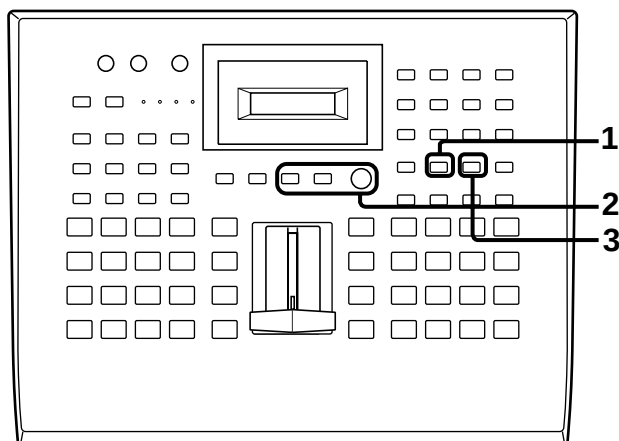
NOTE

After pressing [ENTER/YES], do not turn off the power until the above message is displayed.

For information on copying, refer to the section "Managing PICTURE/TITLE Files" on page 85, and "Managing Programs" on page 89.

● Halting factory reset:
Press [EXIT/NO].

Adjusting Display Contrast



Adjust the display contrast so that it can be read clearly from your normal operating position.

1. Press [UTILITY] in the SETUP/UTILITY block.

The button will flash, and the following display will be shown.



Value

2. Adjust the contrast with the value keys [+] [-] or the value dial.

Press [+] or rotate the value dial clockwise to increase the value, and make the display darker.
Press [-] or rotate the value dial counter-clockwise to decrease the value, and make the display lighter.

3. When adjustment is complete, press [EXIT/NO] in the EXIT/ENTER block to end the process.

The display will return to the original screen, and the [UTILITY] light will go out.

● If a different screen is shown:

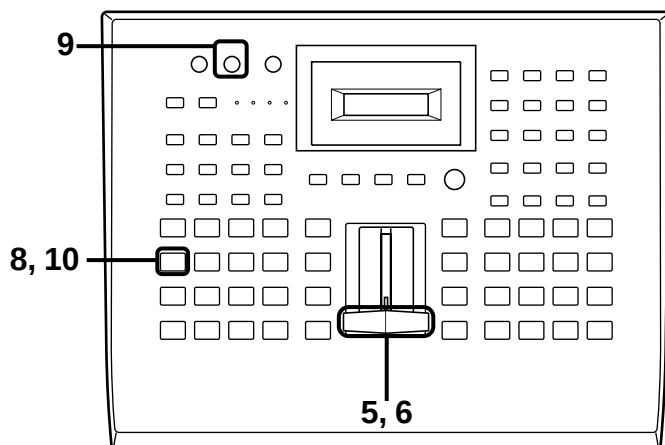
Press the CURSOR [◀] for a few seconds, or press several times.

The displays will change, ending with the one shown to the left.

The range of adjustment is between 1 and 16.

The adjustment process can also be finished by pressing [UTILITY] again.

Check That All Connections Are Correct



Check that all connections are correct by actually playing video tapes and a CD.

- 1. Check that the button state and video fader position are as shown in basic settings (p. 17).**
- 2. Play a recorded video from the source VCR connected to INPUT 1.**
- 3. Increase the volume on the recording VCR and the TV monitor.**

The audio and video tracks from the video being played will be reproduced on the monitor.

● If video and/or audio is not output:

- Check the connections between the source VCR and INPUT 1.
- Check the connections between the OUTPUT jacks and the recording VCR, and between the recording VCR and the monitor.
- If the video is being played from a camcorder, check that the mode selector is set to VCR or Player mode, and that the input/output selector is set to output.
- Check that the recording VCR input selector is set to LINE or external input.
- Check that the monitor input selector is set to video or external input. If there are multiple input jacks, check that the input connected to the recording VCR is selected.
- When the S-video connector is used, be sure that the input selector on the recording VCR is also set to S-video connector.

If the second source VCR is connected to INPUT 2, proceed to step 4.. If not, proceed to step 7..

- 4. Play a different recorded video tape from the source VCR connected to INPUT 2.**
- 5. Move the video fader completely to the SUB SOURCE/PICTURE side.**

Output of the monitor should be changed to the audio and video tracks from the videotape playing through INPUT 2.

● If video and/or audio is not output:

- Check the connections between the second source VCR and INPUT 2.
- If the video is being played from a camcorder, check that the mode selector is set to VCR or Player mode, and that the input/output selector is set to output.

Begin the check after connecting the video equipment as described on p. 14, "Basic Connection."

● If the button state differs:
Turn the power off and back on.

The indicator lit in the AUDIO block will change from VIDEO 1 to VIDEO 2.

6. Return the video fader to the MAIN SOURCE (INPUT 1) side.

The monitor should output the audio and video tracks from the videotape playing through INPUT 1 again.

7. Play a CD on the CD player connected to AUX IN.

8. Press [AUX INS] in AUDIO CONTROL.

The button will change from flashing to steady on, and audio from source video will stop.

9. Rotate the [AUX] knob clockwise to about the center (12:00 position).

The CD audio signal should be output from the monitor.

The AUX indicator in the AUDIO block will light.

.....
● If audio is not output:

- Check the connections between the CD player and AUX IN.
 - Check that the CD player volume is not turned down.
-

10. Press [AUX INS] again.

The button will go out, and the audio signal from the VCR will be output again.

This completes the checks of settings and connections. The next section describes the basic functions and operation of the equipment. We suggest you check the functions while playing recorded videotapes on the source VCRs.

Transition

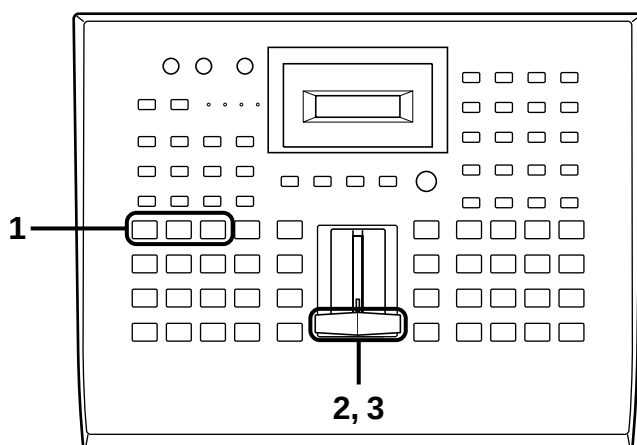
The video stream output to the recording VCR may be either of two combinations : MAIN SOURCE and SUB SOURCE, or MAIN SOURCE and PICTURE/TITLE. You may switch between the two images (transition) or combine them.

MAIN SOURCE: Video stream from the source VCR connected to INPUT 1.

SUB SOURCE: VIDEO 1, VIDEO 2 or PC can be selected.

PICTURE/TITLE: The image from the PICTURE/TITLE file stored in the internal memory or memory card.

Selecting SUB SOURCE



1. Press one of [VIDEO 1], [VIDEO 2] or [PC] in the SUB SOURCE block to select the input source.

The pressed button will light.

[VIDEO 1]: Selects the audio and video tracks from the source VCR connected to INPUT 1. This is the same as MAIN SOURCE.

[VIDEO 2]: Selects the audio and video tracks from the source VCR connected to INPUT 2.

[PC]: Selects the image output from the VGA output connector (display connector) of the personal computer connected to TO PC DISPLAY OUT (p. 61).

2. Move the video fader completely to the SUB SOURCE/PICTURE side.

The selected SUB SOURCE image will be shown on the monitor.

3. Return the video fader to the MAIN SOURCE (INPUT 1) side.

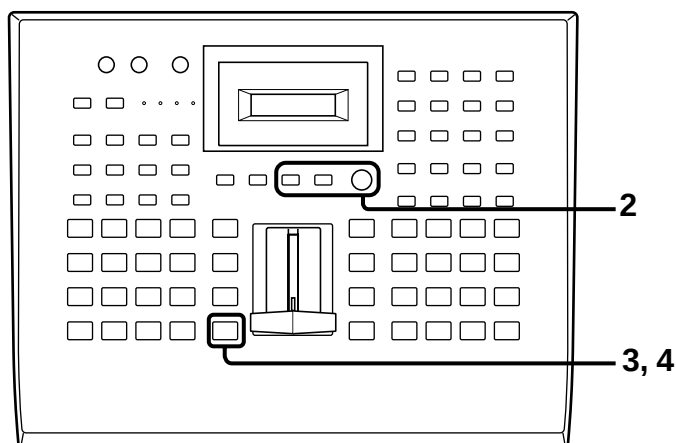
NOTE

If SUB SOURCE is switched when the video fader is set to SUB SOURCE/PICTURE side, the output image will flicker. When you want to select SUB SOURCE during recording, we recommend selecting either during MAIN SOURCE (INPUT 1) is output or after a fade-out.

Transition with the Video Fader

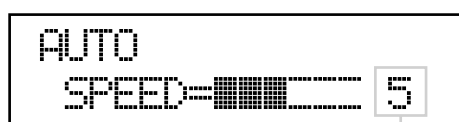
When the video fader is moved to the forward position the MAIN SOURCE video stream will be shown on the monitor, and in the rear position the SUB SOURCE video stream (or PICTURE/TITLE image) will be shown. In an intermediate position, the two video images will be combined to create composite image. There are two methods of transition: MIX, overlapping two images and gradually dissolving one image to the other, and WIPE, the boundary between two images slides to “wipe” away one image while bringing on the other (p. 38).

Automatic Transition (AUTO)



It is possible to automatically execute transitions without moving the video fader. The effect will be the same as moving the video fader to the other side.

1. Check that the display is as shown below.



Value

2. Set the transition speed with [+] [-] or the value dial.

Press [+] or rotate the value dial to the right (clockwise) to increase the value, and the transition speed becomes faster. Press [-] or rotate the value dial to the left (counter-clockwise) to decrease the value, and the transition speed becomes slower.

transition speed can be set to a value between 1 and 10.

3. Press [AUTO] in the TRANSITION block.

The button will flash, and the MAIN SOURCE and SUB SOURCE inputs will be switched at the selected transition speed. The transition indicator will move to the other side. When the transition is complete, the [AUTO] light will go out.

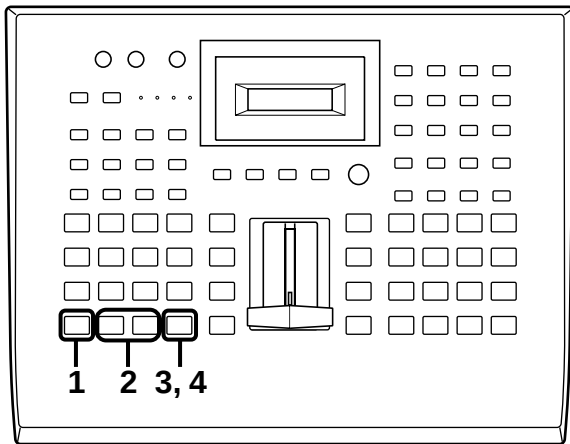
The transition indicator lets you know instantly whether the MAIN SOURCE or SUB SOURCE is being output.

4. Press [AUTO] again.

MAIN SOURCE and SUB SOURCE will be switched again, returning to the original state.

You can also return the video to the original source by moving the video fader all the way to the other side and then returning it to the original side.

Fade-In/Fade-Out



Fade-out gradually transforms the image into a solid white or black image, while fade-in is the reverse. Audio volume changes accordingly. These processes can be used for the start and end of the video production, as well as to link two scenes with a fade for expression of the passage of time or place.

1. Press **[WHITE/BLACK]** in the **FADE CONTROL** block to select whether the fade screen is to be black or white.

The fade screen will be white if the button is lit, and black otherwise. The setting will be switched between black and white each time the button is pressed.

2. Press either **[MAIN]** or **[MAIN+SUB]** to set if only the **MAIN SOURCE** is to be faded, or both **MAIN SOURCE** and **SUB SOURCE** to be faded.

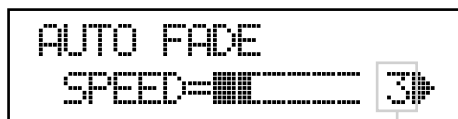
The button will light when pressed.

[MAIN]: Only the **MAIN SOURCE** will be faded.

[MAIN+SUB]: **MAIN SOURCE** and **SUB SOURCE** will be faded simultaneously.

3. Press **[AUTO FADE]**.

The button will flash, the display will change to the one shown below and fade-out will start. The audio volume will decrease together with the fade-out on the video. The flashing will stop when fade-out is complete, and the button will change to steady-on.



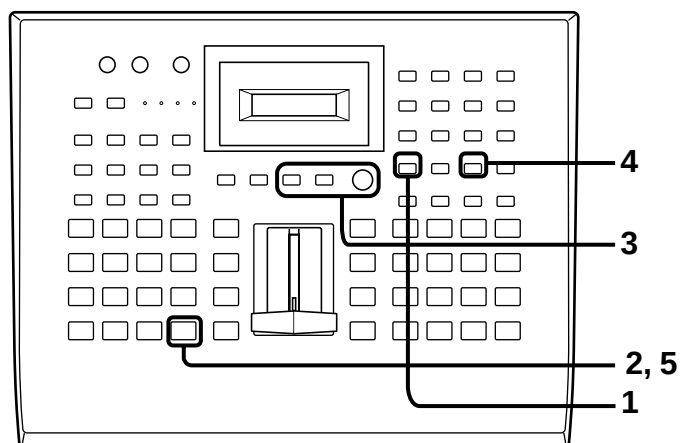
Value

4. Press **[AUTO FADE]** again.

The button will flash, the display will change again to the one shown above and fade-in will start. The audio volume will increase together with the fade-in on the video. The button will go out when fade-in is complete.

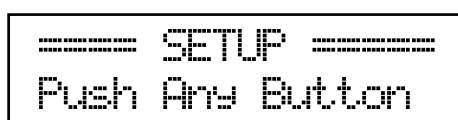
The display will return to its original state in a few seconds.

Adjusting Fade Speed



1. Press [SETUP].

The button will flash, and the display will change to the one shown below.



2. Press [AUTO FADE].

The display will change to the one shown below.



Value

3. Set the speed with [+] [-] or the value dial.

Press [+] or rotate the value dial to the right (clockwise) to increase the value, and the fade speed becomes faster. Press [-] or rotate the value dial to the left (counter-clockwise) to decrease the value, and the fade speed becomes slower.

4. Press [EXIT/NO] to end the set-up process.

The display will return to its original state, and [SETUP] will go out.

5. Press [AUTO FADE] to check the fade speed you set.

If the speed setting is improper, return to step 1. and try again.

● If a different screen is shown:

Press CURSOR [◀].

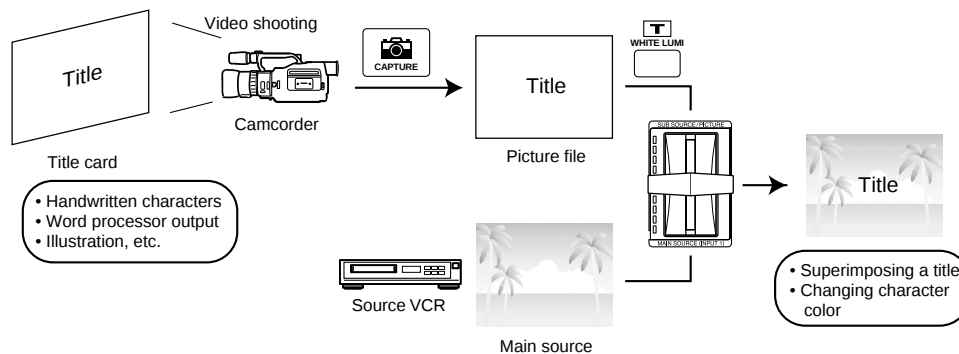
The screen to the left will be shown.

The speed can be set to a value between 1 and 10.

you can also end the process by pressing [SETUP] again.

The fade speed will be shown on the display for a few seconds. You can adjust the setting at that time by pressing [+] [-] or with the value dial.

Creating a Simple Title



Still capture is the term used to describe freezing a selected frame from the SUB SOURCE, just like taking a snapshot of it. Up to 24 captured still images can be stored in the internal memory, and are called PICTURE files. The still image files in memory, similar to the SUB SOURCE, can be combined with the MAIN SOURCE and used in transitions by using the video fader. This function makes it possible to easily create titles to insert into the edited video.

NOTE

Depending on the data size of the captured still images, internal memory may not be able to store 24 files.

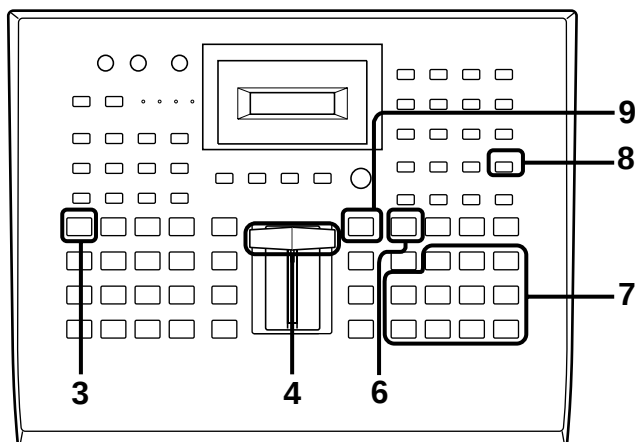
Storing a Still Image (Still Capture)

Before you start, prepare title cards, which are sheets of white paper with letters or illustrations made by hand or printed, or with clippings stuck on them, to be used as titles in your video. Create title cards while referring to the following hints.

Hints for making title cards

- Avoid using stock which is coated, highly reflective, rough or irregular, because it may cause unevenness in the white coloration.
- Provide a good balance between the size of the paper and the size of the text or illustrations used. If text or drawings are too small they may not be reproduced clearly. If sufficient margins are not left, however, the video image will be visually too crowded.
- Use bold lines with no unevenness for text and illustrations. Excessively thin lines may not show up in the video, and excessive density variation may degrade the image quality. In particular, make sure that character edges are sharp.
- If text or illustrations are colored, be sure to use colors with high contrast against the white background. Pale colors or colors close to white may not be reproduced accurately.

After the title card is made, photograph it with the video camera or camcorder as described below, capture the image and store it.



1. Connect the video camera to INPUT 1.
2. Photograph the title card with the video camera.
3. Press [VIDEO 1] to switch SUB SOURCE.
4. Move the video fader to the SUB SOURCE/PICTURE side.
The title card image will be displayed on the monitor.
5. Adjust the card position and camera while watching the monitor screen, and taking the balance of the title and the overall image into account.

Hints when shooting title cards

- Stabilize the video camera with a tripod.
- Adjust the camera so that the edges of the title card are not visible.
- Place the title card as flat as possible, and make sure that it is not bent or the edges rough.
- Adjust illumination and title card orientation so that the lighting of the title card surface is uniform.
- Make sure the title card is free of shadows.

6. Press [CAPTURE] in the PICTURE/TITLE MAKER block.

[CAPTURE] will flash, and the display will change as shown below. Image will be captured.

Now Capturing
Please Wait...

The [PICTURE/TITLE] will flash, after a short time [CAPTURE] and [PICTURE/TITLE] will light, and the display will change to the one shown below. The captured title (still image) will be shown on the monitor and can be checked there.

Push Button
[FILE] or [EXTRA]

The video signal will not be output to the monitor for a short period of time.

- If the image is not what you want:
Press [EXIT/NO].
This will end the capture process, so start over again from step 5..

7. Specify the file number for the captured title (still image), using GROUP [A] to [C] and file number [1] to [8], in the PICTURE/TITLE FILES block.

(Example) To store the title as file number 4 of group B, press [B] and then [4].

The pressed group button will light, and the file button will flash. The display will change as shown below (diagram shows file number B4 selected).



FILE:*B4B5ave?
Push[YES]/[NO]

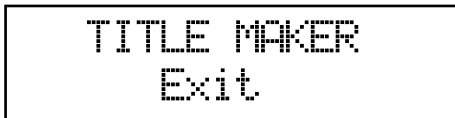
8. Press [ENTER/YES].

The display will change as shown below.



FILE:*B4B5aving

After a few seconds the following display will be shown, and the capture process will end automatically. [CAPTURE] and [PICTURE/TITLE] will go out, and [VIDEO 1] will light. The video stream from the video camera will be shown on the monitor.

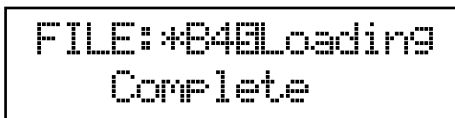


TITLE MAKER
Exit

Check the stored title image to be sure. First check that the video fader is switched to the SUB SOURCE/ PICTURE side, then proceed to the next step.

9. Press [PICTURE/TITLE].

[PICTURE/TITLE] button lights and the following display is shown. The captured title will then appear on the monitor for checking.



FILE:*B4B>Loading
Complete

To capture additional title cards, return to step 2..

If no more images are to be captured, press SUB SOURCE button [VIDEO 1], [VIDEO 2] or [PC].

In addition to titles you can also capture illustrations, photographs, maps and stills from other videos. These can be saved as files and used in scene changes and cuts.

NOTE Captured still images in PICTURE files will have slightly different size and position than their source videos.

NOTE Unauthorized usage of any materials copyrighted by third parties (video or music from broadcasts, tapes, or disks; printed materials, such as photographs, illustrations, etc.) is a violation of copyright law, except for private use only.

If you press a number button which is not lit, a new PICTURE/TITLE will be stored to memory additionally.

If you select a lit button, the PICTURE/TITLE already stored at that number will be overwritten by the new one and deleted.

While the screen on the left is shown, group and file number can be changed.

Press [EXIT/NO] to return to the previous screen.

The video signal will not be displayed on the monitor again.

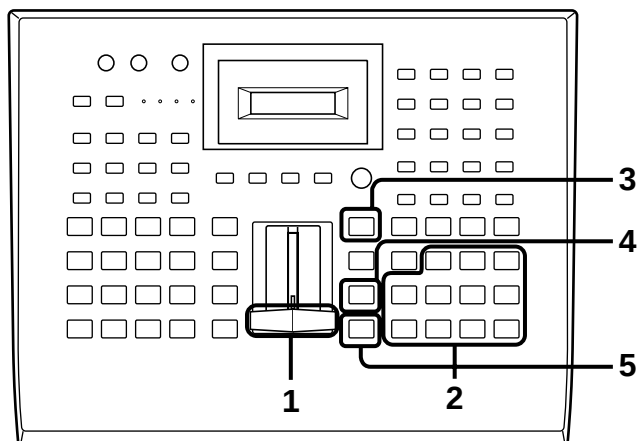
[VIDEO 1] will go out.

If there is a problem, repeat from step 3..

The display will return to its original state in a few seconds.

[PICTURE/TITLE] will go out.

Inserting a Still Image into MAIN SOURCE



The PICTURE file images captured from illustrations, photographs, maps and other videos can be inserted into the MAIN SOURCE. This makes it possible to add variation to your clips and is effective in scene changes even with only a single source VCR.

1. Set the video fader to the MAIN SOURCE (INPUT 1) side.

Make sure that the MAIN SOURCE is shown on the monitor.

2. Specify the PICTURE file to be loaded, by specifying GROUP [A] to [C] and file number [1] to [8].

The specified group button will light, and the number button will flash.

3. Press [PICTURE/TITLE].

[PICTURE/TITLE] and [TITLE OUT] will light. After the following display is shown, file loading is complete when the display returns to the original screen .

FILE: *B4B Loading
Complete

4. Press [TITLE IN].

[TITLE IN] will flash and [TITLE OUT] will go out. The loaded still image will replace the MAIN SOURCE on the monitor. When transition is complete, [TITLE IN] will light.

5. Press [TITLE OUT].

[TITLE OUT] will flash and [TITLE IN] will go out. The loaded still image will be replaced by the MAIN SOURCE on the monitor. When transition is complete, [TITLE OUT] will light.

To load another PICTURE file, repeat from step 2..

If PICTURE/TITLE files will not be used again, press SUB SOURCE button ([VIDEO 1], [VIDEO 2] or [PC]).

The methods of inserting and removing PICTURE/TITLE files can also be set. For details, refer to p. 54, "TITLE IN/OUT Settings."

SUB SOURCE [VIDEO 1], [VIDEO 2] and [PC] will go out.

[TITLE OUT] will not light unless the video fader is moved completely to the MAIN SOURCE (INPUT 1) side.

The still image can be inserted even when the video fader is moved to the SUB SOURCE/PICTURE side, but [TITLE IN] and [TITLE OUT] cannot be used.

If [PICTURE/TITLE] is already lit, step 3. is not needed.

[PICTURE/TITLE] will go out.

Superimposing a Title with TITLE CAMERA/KEY

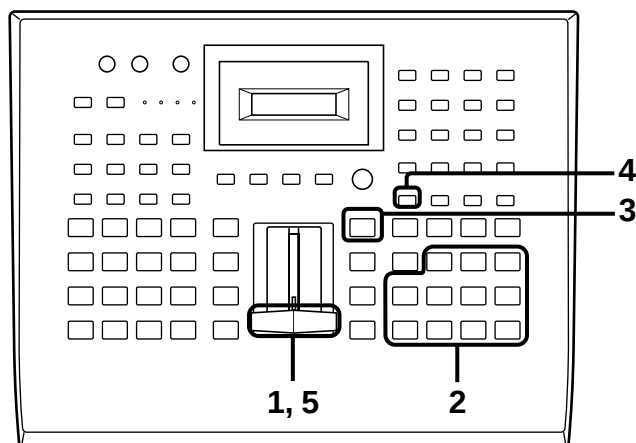
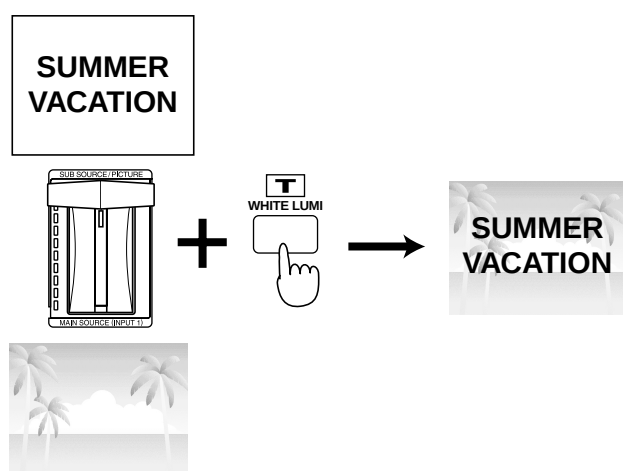
The TITLE CAMERA/KEY function makes it possible to cut out a part of a SUB SOURCE or PICTURE/TITLE file image and replace it with the MAIN SOURCE. The portion of the SUB SOURCE or PICTURE/TITLE to be cut can be selected through the following three methods.

WHITE LUMI (White Luminance Key): The white portions of the SUB SOURCE or PICTURE/TITLE file image are cut and replaced with the MAIN SOURCE.

BLACK LUMI (Black Luminance Key): The black portions of the SUB SOURCE or PICTURE/TITLE file image are cut and replaced with the MAIN SOURCE.

CHROMA (Chroma Key): The blue portions of the SUB SOURCE or PICTURE/TITLE file image are cut and replaced with the MAIN SOURCE (p. 70).

Use the WHITE LUMI in TITLE CAMERA/KEY function with a PICTURE file image captured from a title card (p. 26) to combine a title with the MAIN SOURCE.



- 1.** Switch the video fader to the MAIN SOURCE (INPUT 1) side.
Check that the MAIN SOURCE is shown on the monitor.
- 2.** Specify the PICTURE file of a title to load with GROUP [A] to [C] and file numbers [1] to [8].
- 3.** Press [PICTURE/TITLE].

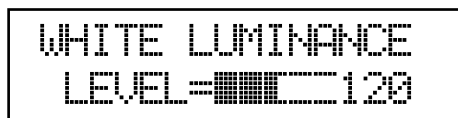
The load process is complete when the button lights and the display returns to the original screen.

TITLE CAMERA/KEY effects are enabled when SUB SOURCE/PICTURE side is selected.

[TITLE OUT] will also light.

4. Press [WHITE LUMI] under TITLE CAMERA/KEY.

The button will light, and the display will change to the following.



The display will return to the original screen in a few seconds.

5. Switch the video fader to the SUB SOURCE/PICTURE side.

The text portions of the title will gradually be combined with the MAIN SOURCE.

Return the video fader to the MAIN SOURCE side and the title will vanish from the video.

To load a different file, return to step 2..

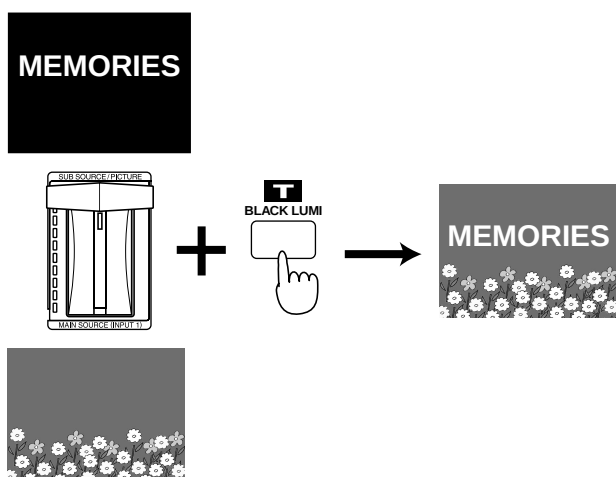
To cancel the TITLE CAMERA/KEY function, press [WHITE LUMI] and the button will go out.

- If the characters are transparent:

- If the white background remains:

Adjust the key level as described in the next section, "Adjusting Key Level" (p. 32), from step 5..

BLACK LUMI is the reverse of WHITE LUMI, cutting out the black portions of the image and replacing them with the MAIN SOURCE. Normally title cards or PC images with black backgrounds and white text are captured, and the black portion of captured image is then replaced with the MAIN SOURCE as shown.



The effect in this case is the same as WHITE LUMI, with the exception of the fact that the characters are white, but when BLACK LUMI is used with a white backgrounds title screen the MAIN SOURCE can still be seen through the characters in the title, which act as windows in the composite image. This can be a very interesting effect when characters are large and bold, and the white is relatively small in area.

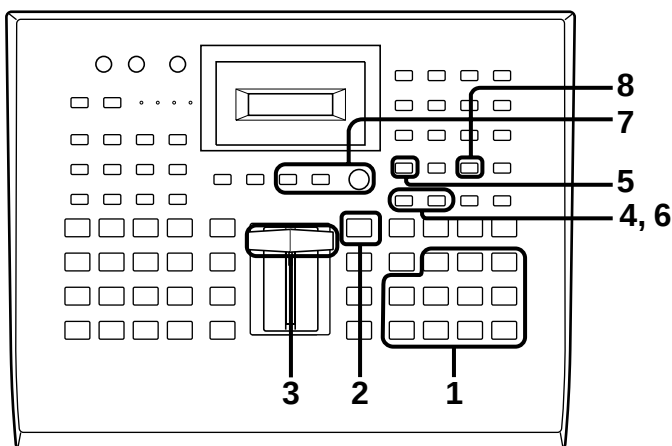
Adjusting Key Level

WHITE LUMI and BLACK LUMI in TITLE CAMERA/KEY function are based on image luminance, automatically judging which portions of the image are to be cut out (Luminance Key). Brighter portions in WHITE LUMI or darker portions in BLACK LUMI are cut out. This judgment threshold can be adjusted.

If the adjustment is inappropriate, portions of the title may be missing or transparent, or black or white portions may be cut out non-uniformly. Adjust the threshold to suit the particular color and brightness of the PICTURE/TITLE file image, or the state of the combined MAIN SOURCE.

NOTE

If the key level value is too low, non-text background regions will not be cut out, and the MAIN SOURCE image will be totally hidden. If the value is too high, even the text will be cut out, preventing the title from being shown. Avoid setting the key level to extremely high or low values.



1. Specify the PICTURE file to be loaded with GROUP [A] to [C] and file number [1] to [8].
2. Press [PICTURE/TITLE].
The PICTURE file will be loaded.
3. Set the video fader to the SUB SOURCE/PICTURE side, and check the still image on the monitor.
4. Press [WHITE LUMI] (or [BLACK LUMI]), and check the composite image of the MAIN SOURCE and the still image.
5. Press [SETUP].

The button will flash, and the following display will appear.



The threshold level will be shown on the display for a few seconds. You can adjust the setting at that time by pressing [+] [-] or with the value dial.

6. Press [WHITE LUMI] or [BLACK LUMI].

The display will change to the one shown below (in the case [WHITE LUMI] is pressed).



Value

7. Adjust the threshold properly with [+] [-] or the value dial, while checking the result on the monitor.

If the setting is too high, WHITE LUMI will also cut out dark (non-white) regions, while in BLACK LUMI bright (non-black) regions will also be cut out.

If the setting is too low, it will be difficult to cut out regions of the image which are not very bright with WHITE LUMI, while in BLACK LUMI it will be difficult to cut out regions of the image which are not very dark.

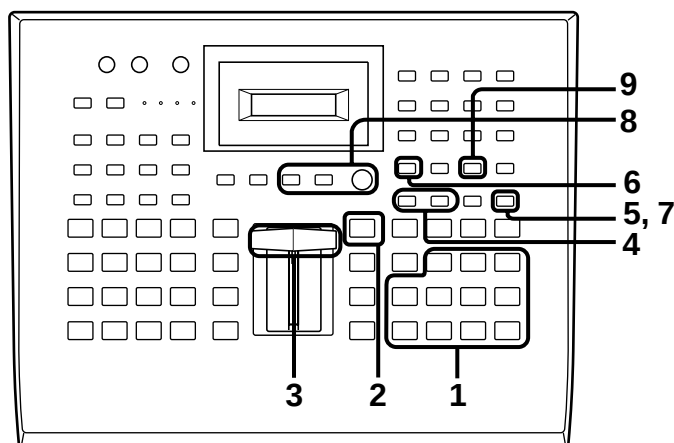
8. Press [EXIT/NO] to end the setup process.

The value can be set from 0 to 255.

If you rotate the value dial while depressing [+] or [-], the change increment will be 10 instead of 1.

You can also end the setup process by pressing [SETUP] again.

Changing the Title Color



When the title camera [WHITE LUMI] or [BLACK LUMI] is used to combine a title with the MAIN SOURCE, the color of the title can also be changed. Any of 58 colors may be selected. Select a color which will be easy to read for the particular MAIN SOURCE color and brightness.

1. Select the PICTURE file of a title from GROUP [A] to [C] and file number [1] to [8].
2. Press [PICTURE/TITLE].
The file will be loaded.
3. Set the video fader to the SUB SOURCE/PICTURE side, and check the title on the monitor.
4. Press [WHITE LUMI] (or [BLACK LUMI]), and check the composite image of the title and the MAIN SOURCE on the monitor.
5. Press [COLOR] under TITLE CAMERA/KEY.

The button will light and the display will change to the one shown below. The title will change to the selected color.



Value

6. Press [SETUP].

The button will flash, and the display will show a message reading "====SETUP====Push Any Button."

7. Press [COLOR].

The display screen will change to the one shown above.

The setting can be changed [+] [-] or the value dial. The display will return to the original screen after a few seconds.

8. Adjust the color with [+] [-] and the value dial, while watching the monitor.

Select any of the 58 available colors.

9. Press [EXIT/NO] to end the setup process.

To insert the colored title into the MAIN SOURCE, turn on [WHITE LUMI] (or [BLACK LUMI]) along with [COLOR].

If you rotate the value dial while depressing [+] or [-], the change increment will be 10 instead of 1.

For color choices, refer to "Color Palette" on p. 96.

U01 to U10 can be set to any color by the user. These are called user colors (p. 51).

You can also end setup by pressing [SETUP] again.

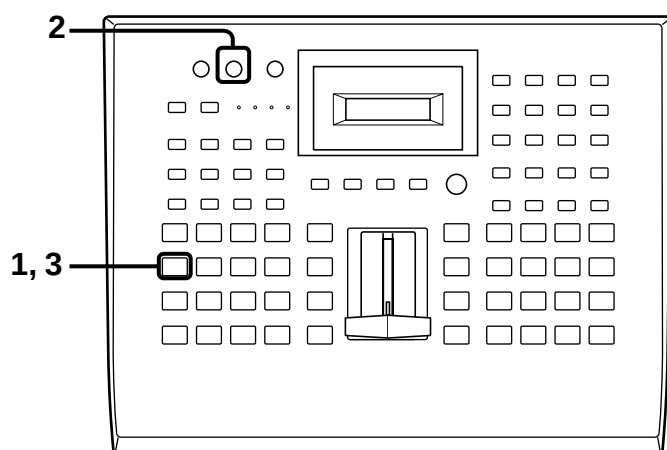
Adding Music or Narration

Next try adding music or narration to the video stream. Play music from a CD player or other source connected to the AUX IN jack on the rear panel and mix it with the audio track on video, or replace audio entirely. To add narration, you can also use a microphone (sold separately) connected to the MIC jack (monaural).

You can connect headphones (sold separately) to the PHONES jack on the rear panel to listen to the audio track being mixed (this is the same as the audio from the OUTPUT jack). Headphone volume can be adjusted with [PHONES]. Adjust the volume gradually to an appropriate level.

NOTE *Unauthorized usage of any music or vocals copyrighted by third parties, such as CDs, MDs, or tapes, is a violation of copyright law, except for private use only.*

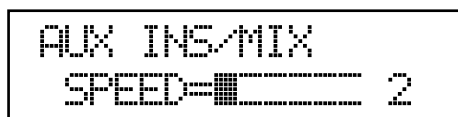
Muting Audio Track and Adding Music (Using AUX INS)



It is possible to replace the audio tracks of the MAIN SOURCE and SUB SOURCE with the music from the CD player, and output only CD music.

1. Press AUDIO CONTROL [AUX INS].

The button will flash, and display will be as shown below. The audio track of the video will gradually be muted, and the music from the CD will increase in volume. When the button changes from flashing to steady on, the audio track of the video is off and only the CD music is being output.



[AUX MIX] will go out.

The display will return to the original screen in a few seconds.

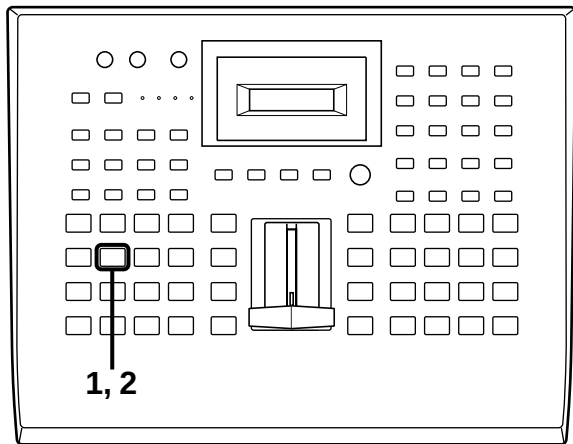
2. Use [AUX] to adjust the volume of the audio track.

Select a volume level that balances with the audio track of the video.

3. To return to the audio track of the video, press [AUX INS] again.

The button will flash, and the above display will be shown again. At the same time, music from the CD will be gradually muted, and the audio track of the video will increase in volume. When the CD audio is off and only the audio track of the video being output, the button will go out.

Mixing Music and Audio Tracks (AUX MIX)



It is possible to mix the audio tracks from the MAIN SOURCE and SUB SOURCE with the music from the CD player.

1. Press [AUX MIX].

The button will flash, and the display will be as shown below. At the same time the audio track of the video will gradually decrease in volume, and music from the CD will increase in volume. When both reach the appropriate levels the volume will be uniform, and the button will change from flashing to steady on.



2. To return to only the audio track of the video, press [AUX MIX] again.

The button will flash and the display will again appear as shown above. The audio track of the video will gradually increase in volume, and the CD music will gradually be muted. When the music is fully muted and only the audio track of the video is audible, the button will go out.

[AUX INS] will go out.

The display will return to the original screen in a few seconds.

Adding Narration through a Microphone

1. Turn [MIC] gradually to adjust the volume.

Adjust the volume to achieve a good balance with the audio track of the video and music.

2. Add narration as needed to the video stream.

NOTE

If [MIC] volume is set too high while sound is being output from the TV monitor (or speakers), "howling," generation of sharp sound by feedback, may occur. In this case, take the following actions:

- Lower [MIC].
- Lower the volume on the monitor (or speakers).
- Separate the monitor (or speakers) and microphone from each other.
- Change the microphone orientation so it does not face the monitor (or speakers).

When using a microphone, no howling will occur if the monitor volume is set reasonably low, and the audio is monitored with headphones.

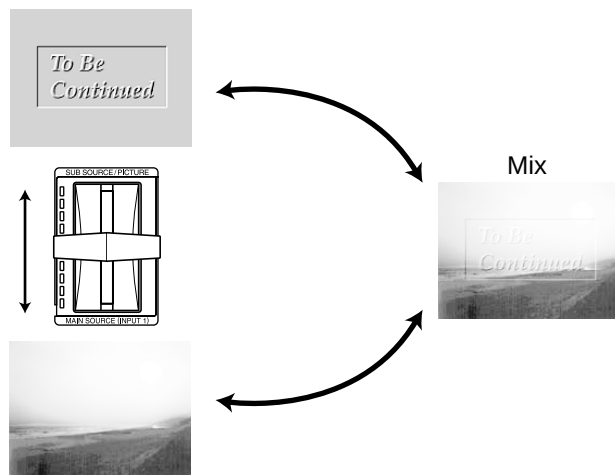
Versatile Functions for Editing Two Video Sources Together

This chapter describes functions related to combining two video streams, using two source VCRs to edit two tapes into a single tape.

Selecting Transition Method

There are two methods of transition between MAIN SOURCE and SUB SOURCE (or PICTURE/TITLE). The first is to overlay the two images and gradually switch from one to the other, and the second is to slide the boundary between two sources to wipe off one by the other. These are called, respectively, the [MIX] and the [WIPE].

Mix



This method overlays the two video streams, and gradually switches from one to the other. Also called the overlap or dissolve, it can be used for interesting effects to represent changes in time or place, to switch to different shots (different angles, long or close-up shots), or to express contrast or association between before / after transition.

1. Press [MIX].

The button will light.

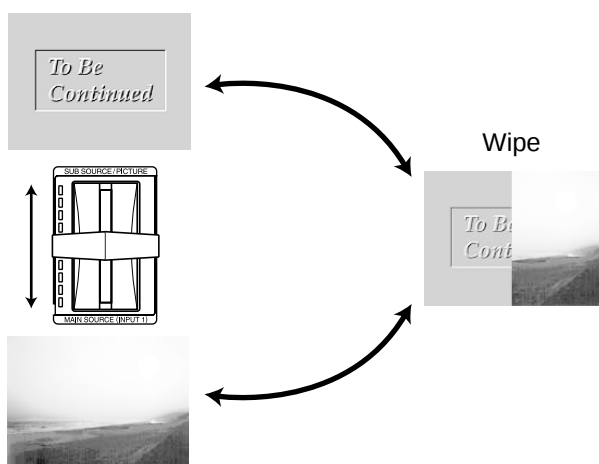
2. Move the video fader gradually to the other side.

The second image will gradually appear over the original video, and eventually replace it. The audio will change along with it.

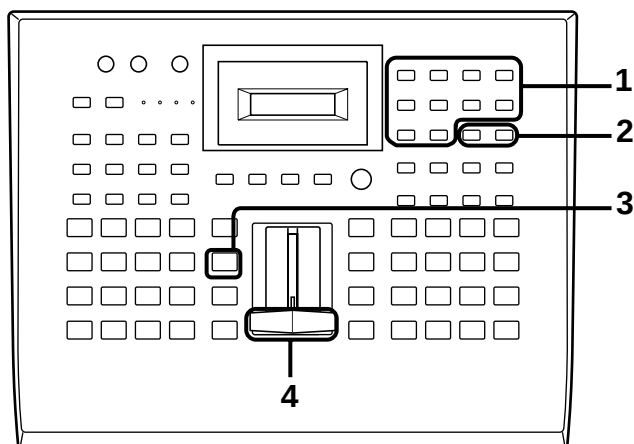
Return the video fader and the original video and audio will return.

[WIPE] will go out.

Wipe



This method switches the two video streams by smoothly sliding the boundary between two images on the screen. This is used to provide a visual impact on the viewer, or make them feel dynamic motion.



1. Select the wipe pattern by pressing WIPE PATTERN GROUP [A] or [B], and pattern number [1] through [8].

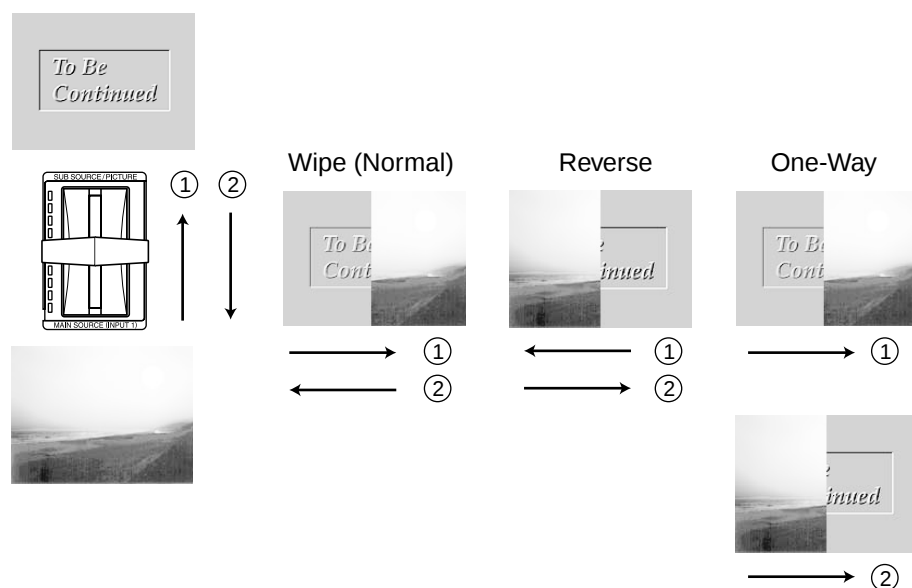
(Ex.) To select B group, pattern number 7, press [B] and then [7].

The pressed group and pattern number buttons will light.

2. Press [REVERSE] or [ONE-WAY] as needed.

The pressed buttons will light.

When the video fader is moved from the MAIN SOURCE side to the SUB SOURCE side the direction of wipe motion will be opposite of that used when the video fader is moved in the other direction. [REVERSE] reverses the assignments. [ONE-WAY] always uses a wipe in the same direction regardless of the video fader motion.



In the panel drawing, the A group is black and the B group is blue.

To cancel, press [REVERSE] or [ONE-WAY] again.

[REVERSE] and [ONE-WAY] can be used together.

3. Press [WIPE].

[WIPE] will light.

4. Move the video fader gradually in the other side.

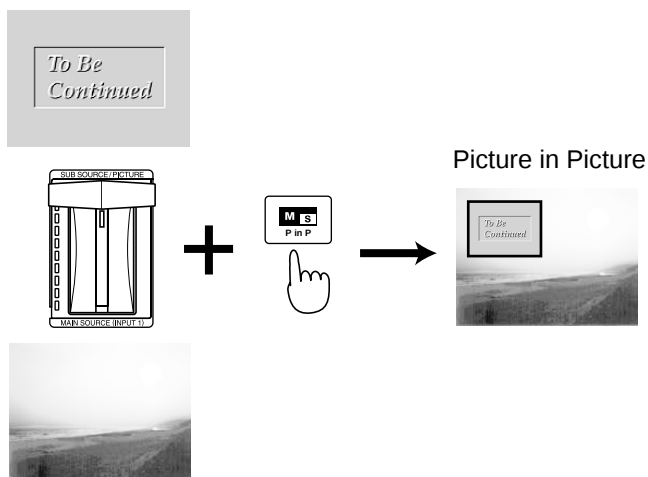
The second video will appear over a portion of the original video, and gradually spread to replace it entirely.

When the video fader is returned, the original video will return.

NOTE

When the TITLE CAMERA/KEY function (WHITE LUMI/BLACK LUMI/CHROMA) is being used, the interface line of the wipe pattern may be visible against the MAIN SOURCE which is combined with the background.

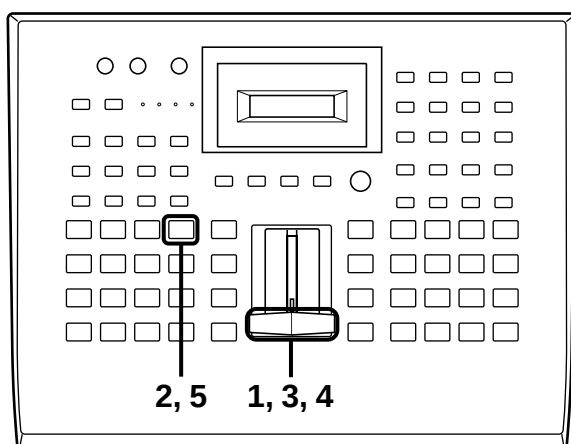
Picture in Picture (P in P)



This function is used to create a smaller window in the MAIN SOURCE, and display a smaller version of the selected SUB SOURCE within it.

NOTE

TITLE files made on the PICTURE/TITLE MAKER and stored after transparency process (p. 50) cannot be displayed as a P in P image.



[MIX] will go out.

When the B group is selected, the [WIPE] and pattern number buttons will flash for a few seconds. Wipe cannot be executed during this period. Wait until the buttons are steady-on.

The composite image will be output when the video fader is set to the SUB SOURCE / PICTURE side.

1. Set the video fader to MAIN SOURCE.

2. Press [P in P].

The button will light, and the following display will appear.



3. Move the video fader gradually to the SUB SOURCE side.

When [MIX] is lit, the window will gradually appear in a corner of the MAIN SOURCE.

When [WIPE] is lit, the window will appear in a corner of the MAIN SOURCE, and will move and change in size.

4. Return the video fader gradually to the MAIN SOURCE side.

The small window will vanish in the reverse action of step 3. above.

5. Press [P in P] again.

The button will go out, and the function will be turned off.

NOTE

When the video fader is at the SUB SOURCE/PICTURE side and you press [P in P], the output video will waver for a moment. When you want to turn the Picture in Picture function on/off during recording, we recommend pressing [P in P] either during MAIN SOURCE (INPUT 1) is output or after a fade-out.

The display will return to the original screen in a few seconds.

Adding Effects to Imagery

Special effects can be added to the SUB SOURCE or PICTURE/TITLE file images. Effects can also be used with TRANSITION to insert special effect imagery while changing MAIN SOURCE and SUB SOURCE (or PICTURE/TITLE).

NOTE

Rapidly repeated changes in brightness or color may provide an excessive amount of stimuli for viewers and injure their health. The effects applied by this equipment may be capable of producing excessive amounts of stimuli. In the interest of the health of your viewers, be sure to avoid the excessive use of effects and other light stimuli on video when using the equipment.

NOTE

The permission of the copyright holder is required before use of this equipment to apply special effects to, or modify the content of copyrighted video or other material by using functions such as mix, wipe, or picture-in-picture, unless your sole purpose is that of private personal enjoyment.

SUB SOURCE VIDEO EFFECTS

The 12 buttons in the SUB SOURCE VIDEO EFFECTS block are used to select the effect applied to the SUB SOURCE or PICTURE/TITLE file image. The buttons have the following functions:

[STROBE]: The video is captured as a series of stills at a fixed interval.

[STILL]: Freeze-frames video image.

[SOLARIZE]: Gradations of image brightness are reduced to fewer levels to produce an artistic appearance.

[COLORIZE]: Applies color depending on the brightness of each region of the original image.

[MONO]: Converts a color image into black-and-white.

[SEPIA]: Converts the image to sepia tone.

[NEGA]: Produces a negative of the image.

[CENTER IMAGE]: Adds mist around the image.

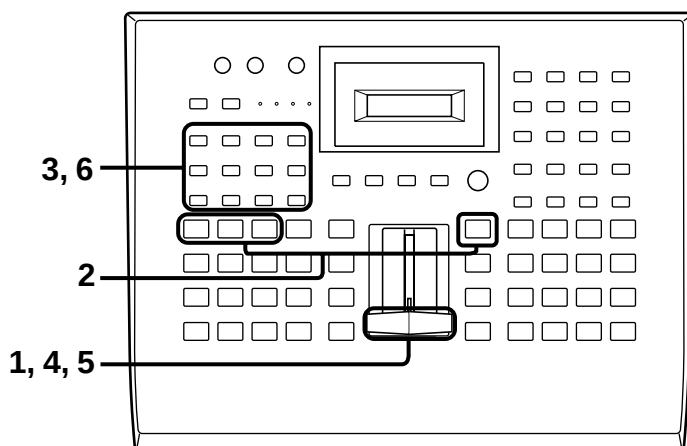
[USER 1]: The factory default assignment is TAP-STROBE. A series of still images from the video is displayed at the interval that [TAP] is pressed.

[USER 2]: The factory default assignment is TAP-SOLARI. SOLARIZE is applied at the interval that [TAP] is pressed.

[USER 3]: The factory default assignment is TAP-FLASH. A flash effect is applied at the interval that [TAP] is pressed.

[USER 4]: The factory default assignment is TAP-COLOR. The color is changed at the interval that [TAP] is pressed.

NOTE Particular effects may not be usable with PICTURE/TITLE images.



- 1. Set the video fader to the MAIN SOURCE side.**
- 2. Press the SUB SOURCE ([VIDEO 1], [VIDEO 2], or [PC]) or [PICTURE/TITLE] and select the image to apply the effects to.**
- 3. Press the SUB SOURCE VIDEO EFFECTS button to select the effect.**

The pressed button will light.
- 4. Move the video fader to the SUB SOURCE/PICTURE side.**

The MAIN SOURCE image will be switched to the image with the effects applied.
- 5. Return the video fader to the MAIN SOURCE side.**

The MAIN SOURCE video will be displayed again.
- 6. Press the lit SUB SOURCE VIDEO EFFECTS button again.**

The button will go out, and the effect will be cancelled.

Effects may be combined to apply multiple effects at once.

You may assign any of 32 effects to buttons [USER 1] through [USER 4] (p. 67).

Refer to p. 67 for information on [TAP].

STROBE, STILL and SOLARIZE cannot be applied to PICTURE/TITLE file images.

Performing MIX transition while the SUB SOURCE is set to [VIDEO 1], the effect intensity looks gradually increased.

TRANSITION EFFECTS

It is possible to insert monochrome images or SUB SOURCE (or PICTURE/TITLE) image with applied effects during transition between MAIN SOURCE and SUB SOURCE (or PICTURE/TITLE). Select one of the following four buttons.

[NORMAL]: No effects applied during transition. This button is left lit for standard usage.

[COLOR INSERT]: A monochrome screen is inserted during transition to the next image.

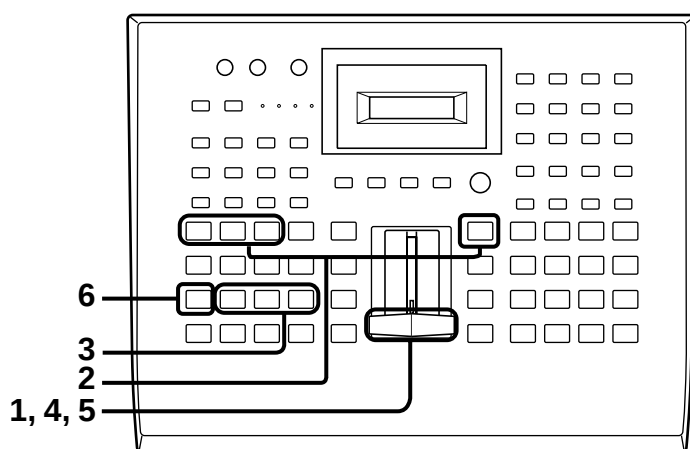
[EFFECT 1]: The factory default assignment is STILL. The SUB SOURCE image is frozen to a still image in the TRANSITION from SUB SOURCE to MAIN SOURCE.

[EFFECT 2]: The factory default assignment is SOLARIZE. Solarized SUB SOURCE will be inserted during transition to the next image.

You can assign any of the 12 effects to [EFFECT 1] and [EFFECT 2] (p. 71).

NOTE

Certain effects cannot be used on PICTURE/TITLE file images.



1. Set the video fader to the MAIN SOURCE side.
2. Press the SUB SOURCE ([VIDEO 1], [VIDEO 2], or [PC]) or [PICTURE/TITLE] and select the image to transition to.
3. Press [COLOR INSERT], [EFFECT 1] or [EFFECT 2] in TRANSITION EFFECTS to select the effect.

The pressed buttons will light, and [NORMAL] will go out.

4. Move the video fader to the SUB SOURCE/PICTURE side.
5. Return the video fader to the MAIN SOURCE side.

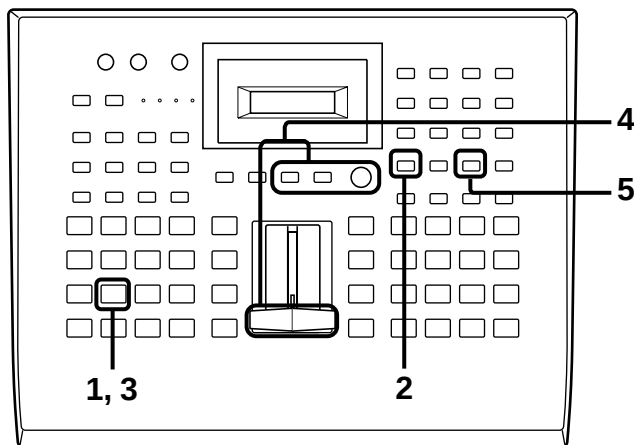
With [COLOR INSERT], a monochrome screen will be inserted when the video fader reaches about the middle position.

When [EFFECT 1] or [EFFECT 2] are used, the SUB SOURCE (or PICTURE/TITLE) with applied effects will be inserted during transition.

6. Press [NORMAL].

[NORMAL] will light, and the button pressed in step 3. will go out. The TRANSITION EFFECTS will be cancelled.

Changing the COLOR INSERT Color



The background color used to insert during transition may be selected from any of 58 colors.

1. Press [COLOR INSERT].

The button will light.

2. Press [SETUP].

The button will flash, and the display will show a message reading "SETUP Push Any Button."

3. Press [COLOR INSERT] again.

The following display will appear.



Value

4. You can adjust the color with [+] [-] and the value dial while checking the effect on the monitor by moving the video fader.

Any of 58 colors may be selected.

5. When you have selected your color, press [EXIT/NO] to end the process.

NOTE

Colors are selected from the Color Palette, but, in addition to the COLOR INSERT, the same palette is used for the TITLE CAMERA/KEY color (p. 34), the SUB SOURCE VIDEO EFFECTS' NEGA (p. 65) and CENTER IMAGE (p. 66) color, and the P in P border color (p. 68). Colors can be set individually, but if some functions with different color settings are executed at the same time, only the color set on the latest processed function is valid and used in common at that moment. Individual settings are temporary ignored.

For a few seconds the color setting will be shown on the display. Select the color you want with [+] [-] or the value dial.

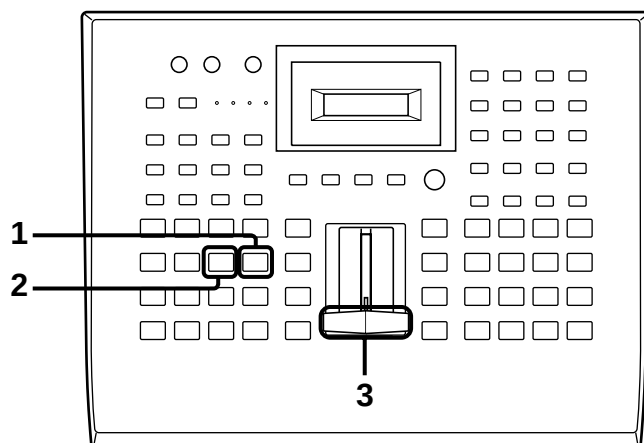
The color choices are the same as used in [COLOR] of the TITLE CAMERA / KEY (p. 34). Refer to "Color Palette" on p. 96.

You can also end setup by pressing [SETUP] again.

Changing Audio Tracks

When [AUDIO FOLLOW] is lit and the video fader is moved, the audio will change in unison with the video as it transitions between MAIN SOURCE and SUB SOURCE, but the audio can also be controlled independently. This can be used for audio effects in scene changes.

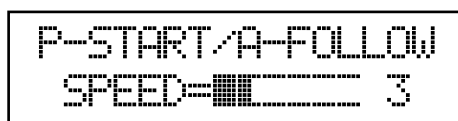
Changing the Audio before the Video (PRE START)



It is possible to change the audio from the current video (selected with the video fader) to the other video, before switching the video stream itself. This is effective in signaling to the viewer that the scene will change, or emphasizing the scene change.

1. Check that [AUDIO FOLLOW] under AUDIO CONTROL is lit.
2. Press [PRE START].

The button will flash and the following screen will be displayed. The audio will switch to that from the other video source. As the audio track changes, the video transition indicator will gradually move to the other side.



When the video transition indicator reaches the opposite end from the video fader and begins to flash, it indicates that the audio track change is complete, and [PRE START] will change to steady-on.

3. Move the video fader to the other side.

The video will transition.

When the video fader is moved all the way and the transition is complete (audio and video tracks match), [PRE START] will go out, and the video transition indicator will also be steady-on.

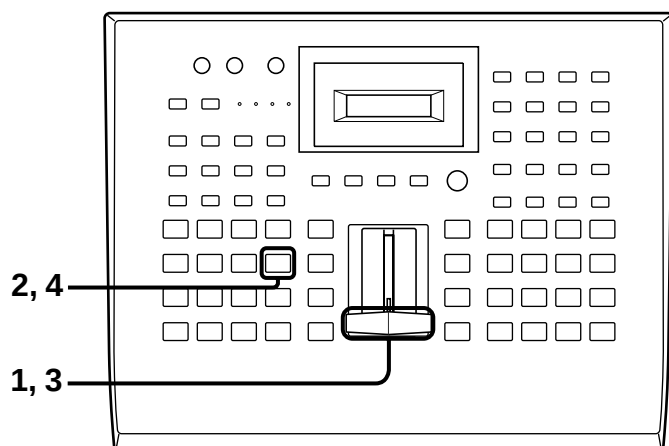
● If not lit:
Press [AUDIO FOLLOW].
The button will light.

The display will return to the original screen in a few seconds.

The PRE START function will be cancelled automatically.

Changing Video Only without Changing Audio

It is possible to use the video fader to change the video stream without changing the audio track being used. This is handy when the audio track from a single tape is to be used through entire editing, or when the audio track from one source is to be skipped in places. Even when both audio and video tracks are used, it is possible to transition the video track before the audio track to maintain the ambience of the prior scene, or emphasize the connection between the two scenes.



1. Move the video fader completely to the side of the video with the audio track you want to use.

2. Press [AUDIO FOLLOW] under AUDIO CONTROL and turn it off.

The video transition indicator will change from steady on to flashing.

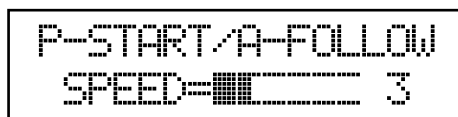
The audio track is now fixed, and the video fader will change only the video. In this state only a single audio track is used throughout.

3. Move the video fader to the opposite side.

The transition will effect only the video stream, not the audio. The video transition indicator will flash at its original position, and be steady-on at the current position.

4. Press [AUDIO FOLLOW].

The button will flash and the following display will be shown. The audio track will begin to change and the flashing video transition indicator will move to the opposite side. Audio track transition will be complete when the indicator reaches the position of the video fader. [AUDIO FOLLOW] will change to steady-on, and system operation will be normal, audio and video will change simultaneously.



The display will return to the original screen in a few seconds.

Advanced Application

This chapter describes advanced uses of the V-5, including the PICTURE/TITLE MAKER, programs, connection with external equipment, and settings for various functions.

MAIN SOURCE Settings

The factory settings for the V-5 are designed so that it outputs the standard video stream, but this video stream can be adjusted to suit your needs. Adjust the coloration while watching the monitor. The video and audio inputs to be used as the MAIN SOURCE can also be selected.

1. Set the video fader to the MAIN SOURCE side.

2. Press [UTILITY].

The display will show one of UTILITY pages.

(The last UTILITY page displayed will remain in memory until the system power is shut off, so the initial page displayed may change.)

3. Hold down CURSOR [▶].

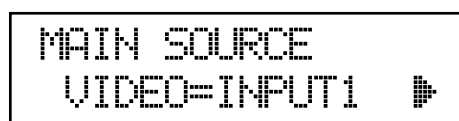
The display will change one after another, ending with the one below.

(You can also press [▶] a number of times.)



4. Press [ENTER/YES].

The following display will appear.



The page can be changed by pressing [◀] when the ◀ mark is shown in the left corner of the display. Likewise, if ▶ is displayed, you can press [▶] to change the display.

5. Select the item with [◀] and [▶], and change the value with [+] [-] and the value dial.

The following items can be set.

○ MAIN SOURCE settings

VIDEO input select: Select the input for the video signal.

INPUT 1

INPUT 2

AUDIO input select: Select the input for the audio signal.

OFF

INPUT 1

INPUT 2

COLOR: Adjusts color depth.

-127 to +128

HUE: Adjusts hue.

-127 to +128

* HUE cannot be adjusted on the V-5 PAL.

6. Press [UTILITY] or [EXIT/NO] twice to end.

The display will return to the original screen, and [UTILITY] will go out.

SUB SOURCE/PICTURE Settings

It is possible to adjust the SUB SOURCE VIDEO 1, VIDEO 2 and PICTURE/TITLE images. Adjust the color while watching the results on the monitor. Audio input can also be selected. (For PC screen adjustment, see p. 62).

VIDEO 1, 2 Settings

1. Press [VIDEO 1] or [VIDEO 2].
2. Set the video fader to the SUB SOURCE/PICTURE side.
3. Press [SETUP].
4. Press [VIDEO 1] or [VIDEO 2] again.

The display will show one of the items which can be selected.

(The last page shown in previous VIDEO 1/VIDEO 2 set-up is stored in memory until system power is shut off, so the initial page displayed may be different.)



5. Select the item with [◀] and [▶], and use [+] [-] and the value dial to change the value.

The following items can be set.

○ VIDEO 1 settings, VIDEO 2 settings

AUDIO input select: Select the audio input jack.

OFF

INPUT 1

INPUT 2

BRIGHT: Adjusts brightness.

-127 to +128

COLOR: Adjusts color depth.

-127 to +128

HUE: Adjusts hue.

-127 to +128

H-POSI: Adjusts horizontal position.

-127 to +128

* HUE cannot be adjusted on the V-5 PAL.

6. Press [SETUP] or [EXIT/NO] to end.

The display will return to the original screen, and [SETUP] will go out.

Setting PICTURE/TITLE

1. Press [PICTURE/TITLE].
2. Set the video fader to the SUB SOURCE/PICTURE side.
3. Press [SETUP].
4. Press [PICTURE/TITLE] again.
5. Select the item with [◀] and [▶], and use [+] [-] and the value dial to change the value.

○ PICTURE/TITLE settings

AUDIO input select: Select the audio input jack.

OFF

INPUT 1

INPUT 2

BRIGHT: Adjusts brightness.

-127 to +128

COLOR: Adjusts color depth.

-127 to +128

HUE: Adjusts hue.

-127 to +128

* *HUE cannot be adjusted on the V-5 PAL.*

6. Press [SETUP] or [EXIT/NO] to end.

Making Titles (Using the PICTURE/TITLE MAKER)

A brief description of the process to insert a title into the video using a PICTURE file stored with a captured title card image along with the TITLE CAMERA/KEY was described on p. 26 “Creating a Simple Title.” The PICTURE/TITLE MAKER can be used to extract characters from captured still images, color them and add edges or shadows for creating professional titles.

This section describes the set-up and adjustment of the PICTURE/TITLE MAKER, and the actual usage process flow.

- * *A still image file made on the PICTURE/TITLE MAKER and stored after transparency process (which is called TITLE file) takes longer to load than a normal PICTURE file. When using a TITLE file, be sure to take sufficient time for loading before use.*
- * *Even if the SUB SOURCE image with special effects applied is captured, no special effects will be applied to the captured still image.*

CAPTURE Settings

In capturing, you can turn stabilize on or off, and also select the image quality to be written to the file.

When the stabilize function is used it is possible to capture a steady still even from an image moving at high speed, but the image quality will be lower. In the normal use, such as title card capturing, the stabilize function is set to OFF and set to ON only for capturing moving imagery.

In the image quality setting, usually select the NORMAL, but select FINE when exceptionally high image quality is desired.

1. Press [SETUP].
2. Press [CAPTURE].
3. Use [◀] and [▶] to select the item, and then adjust the setting with [+] [-] and the value dial.

○ CAPTURE settings

STABILIZE: Sets whether image stabilization (wave elimination) is on or off. Normally it is off, and is only turned on for images with excessive motion.

OFF: Stabilize function is not used.

ON: Stabilize function is used.

QUALITY: Select the quality of the image to be written to the file. Normally it is NORMAL.

NORMAL

FINE

4. Press [SETUP] or [EXIT/NO] to end.

- * *When the image quality is set to FINE the file data will be greater than for NORMAL, which means fewer files will be able to be saved.*
- * *Depending on the specific images being captured, there may be little difference between FINE and NORMAL.*

Setting Character EXTRACTION

In character extraction the characters in the image captured from a title card or other source are extracted to create a custom title image for making a title. The PICTURE/TITLE MAKER can modify this custom title image in various ways to create titles. Character extraction sets the conditions used to create the custom title image.

1. Press [SETUP].
2. Press [EXTRACTION].

-
3. Use [◀] and [▶] to select the item, and then adjust the setting with [+] [-] and the value dial.

○ **EXTRACTION settings**

LEVEL: This sets the threshold to discriminate between the characters and the background.
0 to 50

T-COLOR: Sets the colors of the extracted characters (text) and the background.

BLACK: Black characters on a white background.

WHITE: White characters on a black background.

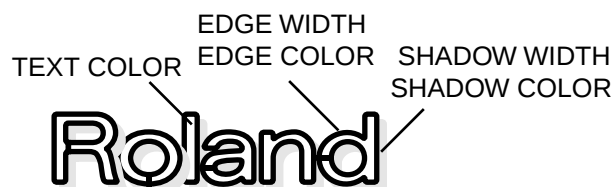
FILTER: Specifies the level of processing used to eliminate unevenness in character or background color. Normally it is 0.
0 to 2

* Increasing the filter setting will result in longer processing time.

4. Press [SETUP] or [EXIT/NO] to end.

COLOR Set-Up

The extracted characters can be processed as described below, and background color can also be specified.



Decide what type of processing you will use in advance, and make the settings accordingly.

1. Press [SETUP].
2. Press [COLOR].
3. Use [◀] and [▶] to select the item, and then adjust the setting with [+] [-] and the value dial.

○ **COLOR settings**

TEXT COLOR: Sets the color of the characters.
58 colors

EDGE WIDTH: Sets the width of the character edges.
0 to 9

EDGE COLOR: Sets the color of the character edges.
58 colors

SHADOW WIDTH: Sets the shadow width.
0 to 9

SHADOW COLOR: Sets the color of the shadow.
58 colors

BKGND COLOR: Sets the color of the background.
58 colors



See p. 96 "Color Palette" of available colors.

4. Press [SETUP] or [EXIT/NO] to end.

Store your favorite colors (user colors)

The colors U01 to U10 can be used to store your favorite colors for use in characters, edges, shadows or background(user colors). You can mix RGB freely to create 10 custom colors for storage.

User colors can be used for coloring PICTURE/TITLE MAKER characters, edges, shadows and background , as well as for NEGA, CENTER IMAGE, COLOR INSERT and TITLE CAMERA/KEY color, border color for Picture in Picture and color for FILE IN / OUT settings in common.

1. Press [UTILITY].
2. Press [◀] and [▶] to display the “USER COLOR SETUP” page.
3. Press [ENTER/YES].
4. Select the user color number with [+] [-] or the value dial.

○ USER COLOR number
COLOR No
U01 to U10

5. Use [◀] and [▶] to select the item, and then adjust the setting with [+] [-] and the value dial.

○ USER COLOR settings
RED
0 to 255
GRN
0 to 255
BLU
0 to 255



If the dial is rotated while the [+] or [-] is depressed, the value will change in units of 10 instead of units of 1.

6. Press [UTILITY] or [EXIT/NO] two times to end.



See p. 96 “Color Palette” for the factory default settings.

Setting TRANSPARENCY

When the prepared title is combined with the video image, it is possible to set the transparency of the characters (including edges and shadows) and the background. Transparency increases as the value increases, so that the image under the title will be more visible. The title will be transparent at 100%, and therefore invisible.

1. Press [SETUP].
2. Press [TRANSPARENCY].
3. Use [◀] and [▶] to select the item, and then adjust the setting with [+] [-] and the value dial.

○ TRANSPARENCY settings

TEXT: Set the transparency for the text portions of the title (including edges and shadows) in percent.
0 to 100%

BKGND: Set the transparency for the background of title in percent.
0 to 100%

4. Press [SETUP] or [EXIT/NO] to end.

Process of Creating Titles

The procedure for using the PICTURE/TITLE MAKER to create a title is described below. First prepare a title card, and prepare to capture it as described on p. 26, “Storing a Still Image (Still Capture).” Then following the instructions above, set the CAPTURE, the EXTRACTION, the COLOR, and the TRANSPARENCY settings in advance.



Settings for EXTRACTION, COLOR, and TRANSPARENCY can be changed even after image capture.



When using an optional memory card for storing a title, be sure to read “Using Memory Cards” on p. 56.

1. Press [CAPTURE] under PICTURE/TITLE MAKER.

The display will show a message reading “Now Capturing” and then change to the following screen. The captured title will be shown on the monitor.



Press [▶] to show the **CAPTURE settings** on the display.

If the image is not what you want, press [EXIT/NO] to end the process, adjust the image, and capture again.

2. Press [EXTRACTION].

The display will show a message reading “Now Extracting” and then change to the following screen. The extracted characters will be shown on the monitor.



If the characters are not what you want, change the page with [◀] or [▶], change the **EXTRACTION settings**, and then press [EXTRACTION] again.



To end creating title here and save the image to a file, press the GROUP [A] to [C], and the file number [1] to [8].

3. Press [COLOR].

A message reading “Now Coloring” will be shown on the display. When the process is complete the screen will change to the following. The colored title will appear on the monitor for checking.



If the colored title is not what you want, change the page with [◀] or [▶], change the **COLOR settings**, and then press [COLOR] again.



To end creating title here and save the image to a file, press the GROUP [A] to [C], and the file number [1] to [8].

4. Press [TRANSPARENCY].

The display will show a message reading “Now Loading” and then change to the following screen. The finished title will be shown on the monitor.

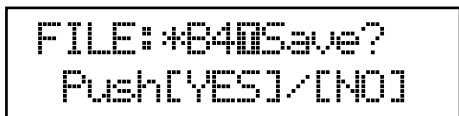


If the result is not what you want, change the page with [◀] or [▶], change the **TRANSPARENCY settings**, and then press [TRANSPARENCY] again.

* A TITLE file made on the PICTURE/TITLE MAKER and stored after transparency process takes longer to load than a normal PICTURE file.

-
5. To save the image to a file, press the GROUP [A] to [C], and the file number [1] to [8].

The display will change to the following (in the case file number B4 is selected).



When the display is as shown, the group and file number can be changed.



The white letter "T" next to the file number indicates that the file is a TITLE file. An "S" is shown for PICTURE files.

6. Press [ENTER/YES].

When file write is complete, the PICTURE/TITLE MAKER will automatically end.



If you wish to start the process over again before completion, press [CAPTURE]. All process made will be discarded, and you can start again from the capture step.



To terminate the process before completion, press [EXIT/NO].

TITLE IN/OUT Settings

Each PICTURE/TITLE file can also store the TITLE IN/OUT settings, such as transitions, speed and keying. This makes it possible to completely control TITLE IN/OUT operation during editing.

1. Set the video fader to SUB SOURCE/PICTURE side.
2. Select the file number by pressing GROUP [A] to [C] and file number [1] to [8].



To load a file from a memory card, select the folder first (p. 57), then press [MEMORY CARD]. The button will light, and then you can select group and file number.

3. Press [PICTURE/TITLE].

Check the image of the loaded file.

4. Press [SETUP].

5. Press the file number button for the selected file.

6. Hold down [◀].

The following display will be shown.



7. Press [ENTER/YES].

8. Use [◀] and [▶] to select the item, and then adjust the setting with [+] [-] and the value dial.

○ **FILE IN/OUT settings**

TRANS [IN]

MIX

WIPE A1 to A8, B1 to B8

WIPE A1[R] to A8[R], B1[R] to B8[R]: Reverse.

SCROLL (↑) : Moving toward the direction an arrow indicates, the file image slides in.

SCROLL (↓)

SCROLL (→)

SCROLL (←)

SPEED [IN]

1 to 10

TRANS [OUT]

MIX

WIPE A1 to A8, B1 to B8

WIPE A1[R] to A8[R], B1[R] to B8[R]: Reverse.

SCROLL (↑) : Moving toward the direction an arrow indicates, the file image slides out.

SCROLL (↓)

SCROLL (→)

SCROLL (←)

SPEED [OUT]

1 to 10

KEY TYPE

--- -: No keying.

WHITE LUMI

BLACK LUMI

CHROMA

TITLE-KEY

KEY LEVEL

0 to 255

COLOR

--- -: No color modification.

58 colors

- * SCROLL speed is different from MIX and WIPE speed. Note that speed settings 9 and 10 are the same speed in SCROLL.
- * PICTURE/TITLE files store imagery extending outside the visible area of a standard TV screen. As a result, when SCROLL is used to move a PICTURE/TITLE file image in transition, extraneous imagery may be seen in areas at the periphery of the file image. In this situation, either change the TRANS [IN]/[OUT] settings to MIX or WIPE, or execute CAPTURE again.
If you execute CAPTURE again, be sure to exclude unnecessary objects or shadows not only from monitored area, but also from peripheral regions outside it in consideration of the above file characteristics.
If you have selected WHITE LUMI, BLACK LUMI or CHROMA in KEY TYPE, it may be possible to adjust the KEY LEVEL to cut off the extraneous imagery.
- * TITLE-KEY is only enabled for TITLE files. When selecting TITLE-KEY, the TRANSPARENCY settings in the PICTURE/TITLE MAKER become effective. The KEY LEVEL setting is ignored.
- * SCROLLs cannot be selected for TRANS [IN] or TRANS [OUT] on the V-5 PAL.



For information on supported colors, refer to the “Color Palette” on p. 96.

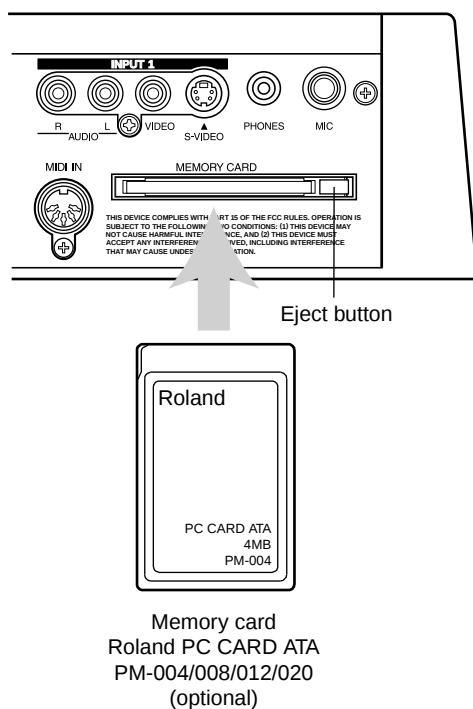


You can check the results of KEY TYPE, KEY LEVEL and COLOR on the monitor.

9. Press [SETUP] or [EXIT/NO] two times.

The file IN/OUT settings made here apply to [TITLE IN] and [TITLE OUT] operation of a PICTURE/TITLE file, when the video fader is set to MAIN SOURCE and [PICTURE/TITLE] is pressed. For details on operation, refer to p. 29 “Inserting a Still Image into MAIN SOURCE.” These settings are also enabled when a program is set and used for PICTURE/TITLE in/out (refer to p. 72, “Programming Sequence for PICTURE/TITLE”).

Using Memory Cards



The dedicated memory cards sold separately, Roland PC CARD ATA PM-004 (4 Mbyte), 008 (8 Mbyte), 012 (12 Mbyte) and 020 (20 Mbyte), can be used to store PICTURE/TITLE files and programs (p. 72). They can hold, respectively, 2, 4, 6 and 10 times more files than the equipment internal memory, and are therefore extremely handy for managing and using many PICTURE/TITLE files and programs.

- * Only use the above dedicated memory cards. Operation cannot be guaranteed with cards from other manufacturers.
- * Read the manual provided with the memory cards before use.
- * Before inserting or removing a memory card, make sure that [SETUP] and [UTILITY] are off, and "AUTO SPEED=" is shown on the display (or that the power is off). In particular, inserting or removing a memory card during [SETUP] or [UTILITY] operations may corrupt the stored data.
- * Please be aware that the contents of a memory card can be lost as a result of a malfunction, or the improper operation of the unit. Unfortunately, it may be impossible to restore the contents of data that was stored in a memory card once it has been lost. Roland Corporation assumes no liability concerning such loss of data.
- * Avoid subjecting memory cards to bending or impact, and do not touch the contacts with your bare fingers.

Always format new memory cards before using them.

Memory Card Preparation (Formatting)

- * When a memory card is being used on the V-5 for the first time, always format on the V-5.
- * When a memory card is formatted, all data stored on the card will be lost. Take care not to accidentally format a memory card with essential data on it.

1. Make sure that [SETUP] and [UTILITY] are off, and the display shows “AUTO SPEED=.”

2. Insert the memory card into the MEMORY CARD slot on the rear panel.

The eject button will pop out.



Insert the memory card with the black seal on top, holding it flat and pushing it in completely.

If the display shows a message “MEM-CARD FORMAT Are you sure?”, proceed to step 6..

3. Press [UTILITY].

4. Use [◀] and [▶] to show “MEM-CARD FORMAT” on the display.

5. Press [ENTER/YES].

The display will show “Are you sure?”



Press [EXIT / NO] or [UTILITY] two times to cancel.

6. Press [ENTER/YES] again.

A message reading “Complete” will be displayed, and formatting will be complete.

7. Press [UTILITY] or [EXIT/NO] to end.

- * DO NOT remove the memory card during formatting.

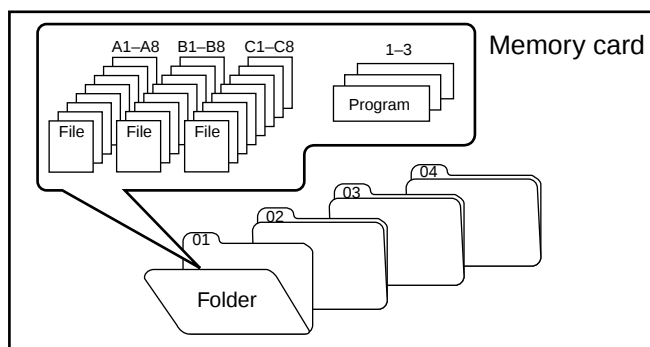
To remove the memory card, make sure that [SETUP] and [UTILITY] are off, and that the display shows “AUTO SPEED=.” Then press the eject button.

Writing/Reading Files to/from Memory Cards

Data is stored on the memory card in units called folders. A single folder can hold up to 24 files (A1 to C8) and 3 programs. Just remember that a single folder is equivalent to the onboard memory of the V-5.



Depending the capacity of the memory card, the number of folders may vary.





For information on programs, refer to p. 72 “Programming Sequence for PICTURE/TITLE.”

Once the memory card is formatted, first specify which folder is to be used.

1. Press [SETUP].
2. Press [MEMORY CARD].

The following display will be shown.



If the display is different, press and hold [◀] until it matches.



The brackets to the right of the folder number will show if any files or programs are stored in that folder. An “F” indicates files are stored and a “P” for programs. If files or programs are not present, a dash will be displayed.

3. Use [+] [-] and the value dial to select the folder number.
4. Press [SETUP] or [EXIT/NO] to end.

When [MEMORY CARD] is pressed, the specified folder will be opened for use.

Use the following procedure to specify the file number on the memory card to write a PICTURE/TITLE file to, or read one from.

1. Press [MEMORY CARD].
2. Specify the file with GROUP [A] to [C] and file number [1] to [8].

When a file is stored to the card, or a file read from the card, the folder specified above will be used.

To use other folders, change the folder number.



To return to the PICTURE/TITLE file selection state on the V-5, press [MEMORY CARD] and turn it off.

To remove the memory card, make sure that [SETUP] and [UTILITY] are off, and that the display shows “AUTO SPEED=.” Then press the eject button.

AUDIO CONTROL Settings

This section explains the function settings for the AUDIO CONTROL block, and settings for audio control during fading.

AUX INS

Sets the audio transition speed between the video and AUX IN when audio from AUX IN is used to replace the current audio track.

1. Press [SETUP].
2. Press [AUX INS].
3. Use [+] [-] and the value dial to change the value.

○ AUX INS setting

SPEED: 1 is the slowest and 10 the fastest.
1 to 10



The same setting is used for AUX MIX speed.

4. Press [SETUP] or [EXIT/NO] to end.

AUX MIX

Sets the audio balance or the transition speed between the audio track of the video and the AUX IN audio when mixing them.

1. Press [AUX MIX].
2. Press [SETUP].
3. Press [AUX MIX].
4. Select the item with [◀] and [▶], then set the value with [+] [-] and the value dial.

○ AUX MIX settings

RATIO: 0 means the video is 100% and AUX IN audio is not output, and 100 is the opposite. When set to 50, they are balanced.
0 to 100

SPEED: Sets the speed at which the audio mixing changes to the preset ratio.
1 to 10



The same setting is used for AUX INS speed.

5. Press [SETUP] or [EXIT/NO] to end.

PRE START

Sets the speed for prestart audio transition.

1. Press [SETUP].
2. Press [PRE START].
3. Use [+] [-] and the value dial to change the value.

○ PRE START setting

SPEED: 1 is the slowest and 10 the fastest.
1 to 10



AUDIO FOLLOW uses the same setting.

4. Press [SETUP] or [EXIT/NO] to end.

AUDIO FOLLOW

Sets the speed for audio transition when [AUDIO FOLLOW] changes from off to on.

1. Press [SETUP].
2. Press [AUDIO FOLLOW].
3. Use [+] [-] and the value dial to change the value.

○ AUDIO FOLLOW setting

SPEED

1 to 10



The same setting is used for PRE START.

4. Press [SETUP] or [EXIT/NO] to end.

Audio Linking during Fade

This sets whether or not audio fades automatically with video.

1. Press [SETUP].
2. Press [AUTO FADE].
3. Press [►] to show the message reading "AUTO FADE AUDIO LINK=."
4. Use [+] [-] and the value dial to set on/off.

○ AUTO FADE setting

AUDIO LINK: Specifies whether or not audio (including AUX IN) is faded with a video fade.

OFF: Audio does not change during video fade.

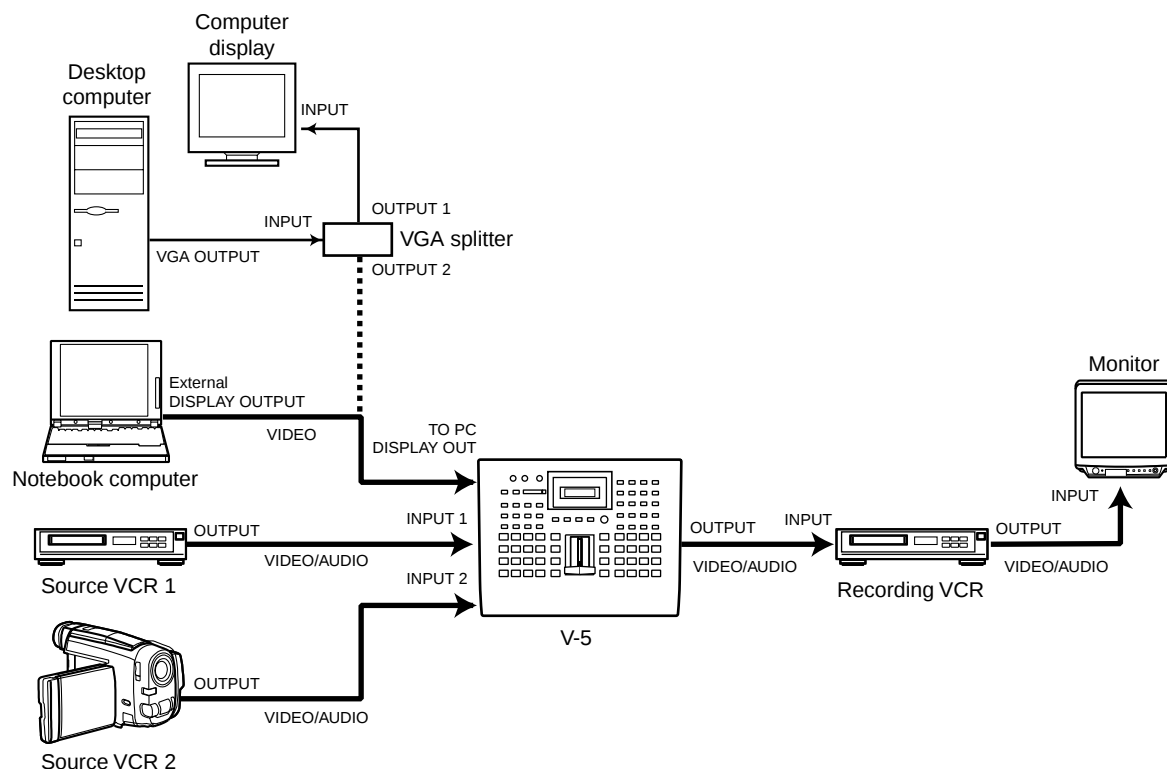
ON: Audio fades with video.

5. Press [SETUP] or [EXIT/NO] to end.

Using PC Image as SUB SOURCE

If the TO PC DISPLAY OUT connector on the rear panel is connected to the VGA output connector on the PC (where the display is normally connected), then the display imagery of the PC can be used as the SUB SOURCE. The TO PC DISPLAY OUT connector is designed to accept the following VGA or RGB signals (for details, refer to your PC user's manual).

Display resolution	H-SYNC frequency	V-SYNC frequency
640 x 480 dots	31.5 kHz	60 Hz (VGA equivalent)
640 x 400 dots	24.8 kHz	53 Hz



- * The TO PC DISPLAY OUT connector is a 15-pin mini D-SUB type female connector. To connect to your PC, use a standard VGA cable (15-pin mini D-SUB type male to 15-pin mini D-SUB type male), or other cable as required for your particular PC specification.
- * A commercial VGA splitter will be required if the PC display is to be viewed on the PC itself as well.
- * There are differences in the display regions for the PC and the video, and the left and right edges of the video monitor may be shown in black where there is no PC image. The very top and bottom of the PC image may also not be shown on the monitor.
- * The image from the PC will be slightly elongated on the video monitor.

Setting PC Image

The image from the PC can be adjusted in the same way as VIDEO 1 and VIDEO 2.

1. Press [PC].
2. Set the video fader to the SUB SOURCE/PICTURE side.
3. Press [SETUP].

4. Press [PC].

The display will show one of the items which can be selected.

(The page previously used will be retained in memory until the system power is cut off, so the initial page may not always be the same.)

5. Select the item with [◀] and [▶], and then change the setting with [+] [-] and the value dial.

The following items can be set:

○ PC image settings

AUDIO input select: Select the audio input.

OFF

INPUT 1

INPUT 2

BRIGHT: Adjusts image brightness.

-127 to +128

H-POS: Adjusts the horizontal position.

0 to 200

MODE: Selects the resolution of the input VGA or RGB signal.

1: 640 x 480 (dots)

2: 640 x 400 (dots)

6. Press [SETUP] or [EXIT/NO] to end.

Effective Usage

This section introduces a few of the methods that a PC can be used with the V-5 effectively, and gives some hints on usage.

● Using PC imagery as still image files

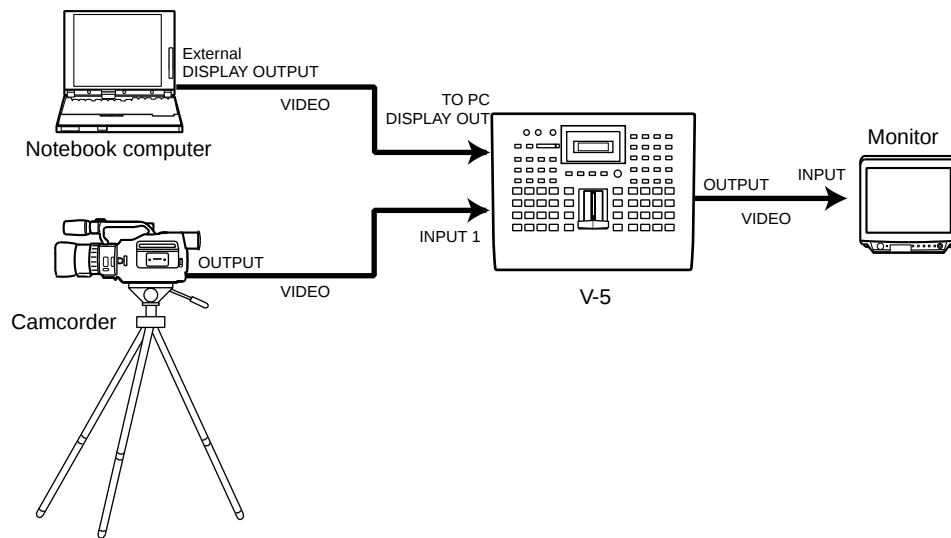
Instead of capturing title cards with the video camera, you can capture the image from the PC and use it as a still image file (PICTURE/TITLE file).

- The extensive font and graphics software resources of the PC can be used to create titles and illustrations, which can be stored to files and used in video transitions or as titles.
- Stored image files can be inserted into the MAIN SOURCE or combined with it as titles through settings described on p. 54 "TITLE IN/OUT Settings."

● Using the PC video stream as the SUB SOURCE

- A video stream such as animation, etc. can be created on the PC and used as the SUB SOURCE.
- Scrolling text, animated 2D/3D titles or animations made with black backgrounds can be played on the PC, and combined with the MAIN SOURCE in realtime using the BLACK LUMI key function.

● Using for presentations



Presentation software in notebook computer and video camera imagery can be combined for effective presentations (for details on presentation software or connection and set-up of personal computers, refer to the respective owner's manuals).

- Use a notebook PC with an external display output connector.
- Set the display (monitor) setting on PC to:

Display resolution	H-SYNC frequency	V-SYNC frequency
640 x 480	31.5 kHz	60 Hz
- Use the presentation software to set the desired diagrams, tables and titles into the desired order.
- Start the presentation software, and set the PC display to use only the external display.
- Use the video camera on INPUT 1 to shoot the speaker and the audience, and switch to the presentation software imagery on SUB SOURCE as needed.
- Use Picture in Picture to combine the PC imagery with the video camera imagery.
- Capture photos, titles, logos and other images to be used in the presentation in advance and save them to PICTURE / TITLE files. They can be used in the opening, ending and during transitions.

Setting SUB SOURCE VIDEO EFFECTS

SUB SOURCE VIDEO EFFECTS can be set, including STROBE interval, SOLARIZE and COLORIZE intensity, SEPIA, NEGA, and CENTER IMAGE color.

STROBE

1. Set the video fader to SUB SOURCE/PICTURE.
 2. Press [STROBE].
The effect will be applied.
 3. Press [SETUP].
 4. Press [STROBE] again.
 5. Use [+] [-] and the value dial to change the setting.
You can check the results on the monitor while changing the setting.
- STROBE setting
SPEED: Sets the interval between still images. 10 is the shortest interval.
1 to 10
6. Press [SETUP] or [EXIT/NO] to end.

SOLARIZE

1. Set the video fader to the SUB SOURCE/PICTURE side.
 2. Press [SOLARIZE].
The effect will be applied.
 3. Press [SETUP].
 4. Press [SOLARIZE] again.
 5. Use [+] [-] and the value dial to change the setting.
You can check the results on the monitor while changing the setting.
- SOLARIZE setting
LEVEL: Sets the effect intensity. 3 is the most pronounced.
1 to 3
6. Press [SETUP] or [EXIT/NO] to end.

COLORIZE

1. Set the video fader to the SUB SOURCE/PICTURE side.
2. Press [COLORIZE].
The effect will be applied.
3. Press [SETUP].
4. Press [COLORIZE] again.
5. Use [+] [-] and the value dial to change the setting.
You can check the results on the monitor while changing the setting.

○ **COLORIZE setting**

LEVEL: Sets the relation between brightness and color.

1 to 3

6. Press [SETUP] or [EXIT/NO] to end.

SEPIA

1. Set the video fader to the SUB SOURCE/PICTURE side.

2. Press [SEPIA].

The effect will be applied.

3. Press [SETUP].

4. Press [SEPIA] again.

5. Select the item with [◀] and [▶], and then use [+] [-] and the value dial to change the settings.

You can check the results on the monitor while changing the settings.

○ **SEPIA COLOR settings**

RED: Sets the amount of sepia red.

0 to 255

GRN: Sets the amount of sepia green.

0 to 255

BLU: Sets the amount of sepia blue.

0 to 255

6. Press [SETUP] or [EXIT/NO] to end.

NEGA

1. Set the video fader to SUB SOURCE/PICTURE.

2. Press [NEGA].

The effect will be applied.

3. Press [SETUP].

4. Press [NEGA] again.

5. Select the item with [◀] and [▶], and then use [+] [-] and the value dial to change the settings.

You can check the results on the monitor while changing the settings.

○ **NEGA settings**

COLOR: Sets the color of the negative image.

58 colors

RATIO: Sets the image brightness.

0 to 255



Refer to “Color Palette” on p. 96 for information on colors.

6. Press [SETUP] or [EXIT/NO] to end.

CENTER IMAGE

1. Set the video fader to SUB SOURCE/PICTURE.
2. Press [CENTER IMAGE].
The effect will be applied.
3. Press [SETUP].
4. Press [CENTER IMAGE] again.
5. Select the item with [◀] and [▶], and then use [+] [-] and the value dial to change the settings.
You can check the results on the monitor while changing the settings.

○ **CENTER IMAGE settings**

LEVEL: Sets the effect level. 10 applies the heavy mist, extending to the center of the image.
1 to 10

COLOR: Sets the color of the surrounding mist.
58 colors



Refer to “Color Palette” on p. 96 for information on colors.

6. Press [SETUP] or [EXIT/NO] to end.

Assigning SUB SOURCE VIDEO EFFECTS

The four user effect keys, [USER 1] to [USER 4] in SUB SOURCE VIDEO EFFECTS, can be set to any of the 32 effects provided. For a list of internal effects, refer to the SUB SOURCE VIDEO EFFECTS List on p. 97.

1. **Set the video fader to the SUB SOURCE/PICTURE side.**
2. **Press the button you wish to assign an effect to, from [USER 1] to [USER 4].**
The assigned effect will be applied.



Unless [TAP] is flashing, the tap effect (p. 67) will not be applied.

3. **Press [SETUP].**
4. **Press the user effect button you selected in step 2 again.**
5. **Use [+] [-] and the value dial to select the effect.**
You can check the results on the monitor while changing the effects.
6. **Press [SETUP] or [EXIT/NO] to end.**

Controlling SUB SOURCE VIDEO EFFECTS by Tapping [TAP] Button

The internal tap effects are applied to the image with the interval imparted by pressing the [TAP] button. At factory shipment the following tap effects are assigned to buttons [USER 1] to [USER 4]. Press one of these buttons, and with the video fader set to the SUB SOURCE side try pressing [TAP] at a selected tempo several times.

[USER 1]: 22: TAP-STROBE
[USER 2]: 23: TAP-SOLARI
[USER 3]: 25: TAP-FLASH
[USER 4]: 26: TAP-COLOR

The interval between button taps will be detected, and [TAP] will flash at that interval, applying the effect at the same interval. Try changing the tempo to match the atmosphere of the imagery or the background music.

To change the tap effects assigned to [USER 1] to [USER 4], press [TAP] so that it flashes, then following the procedure given on p. 67 “Assigning SUB SOURCE VIDEO EFFECTS.”



If you hold the [TAP] button down for about 1 second the stored tap interval will be cleared, and the flashing of [TAP] will stop (it will turn off). This means the tap effect has been cancelled.

** Rapidly repeated changes in brightness or color may provide an excessive amount of stimuli for viewers, and injure their health. The tap effects applied by this equipment may be capable of producing excessive amounts of stimuli. In the interest of the health of your viewers, be sure to avoid the excessive use of effects and other light stimuli on video when using the equipment.*

Setting Picture in Picture

The position, size, border and motion of the picture in picture window can be set. Five types of your favorite can be stored for instant use.

1. Set the video fader to the SUB SOURCE/PICTURE side.
2. Press [P in P].
The inset picture will be displayed.
3. Press [SETUP].
4. Press [P in P].
5. Use [+] [-] and the value dial to select the type.

○ Picture in Picture type

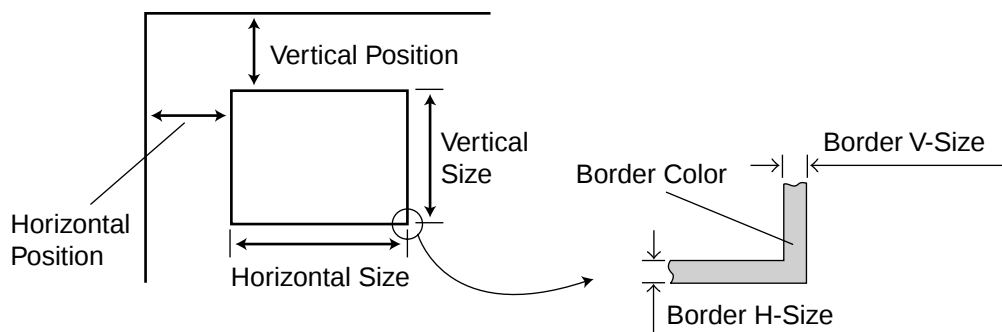
TYPE: Five different types can be stored for use.
1 to 5



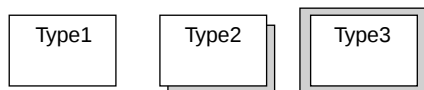
The type set here will be enabled when [P in P] is pressed.

6. Select the item with [◀] and [▶], and then use [+] [-] and the value dial to change the settings of the type selected in step 5.

You can check the results on the monitor while changing the settings.



Border Type



○ **P in P settings**

HORIZONTAL POSITION: Sets the horizontal position.

0 to 165

VERTICAL POSITION: Sets the vertical position.

0 to 225

HORIZONTAL SIZE: Sets the width of the inset picture.

0 to 235

VERTICAL SIZE: Sets the height of the inset picture.

0 to 235

MOTION: Sets inset picture motion for wipe (in and out).

1 to 35

BORDER TYPE: Selects the border type of the inset picture.

1: No border.

2: Right and bottom borders only.

3: Borders on all four sides.

B-COLOR: Selects the border color.

58 colors

BORDER H-SIZE: Sets width of horizontal borders.

1 to 7

BORDER V-SIZE: Sets width of vertical borders.

1 to 7



For information on types of motion, refer to “Picture in Picture Motion List” on p. 99.



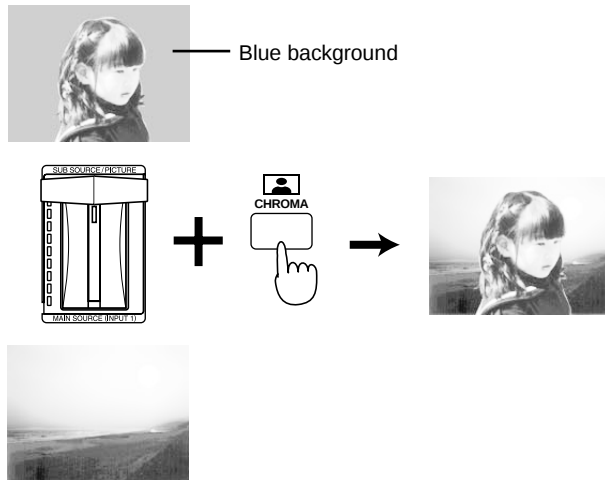
For information on supported colors, refer to “Color Palette” on p. 96.

7. Press [SETUP] or [EXIT/NO] to end.

- * *The horizontal and vertical positions of the inset picture will vary with your monitor. The image resulting from the minimum or maximum setting may not be fully visible on your monitor, or may not reach your monitor edges.*
- * *The inset image will differ slightly between the video and image from the PC.*
- * *TITLE files made on the PICTURE/TITLE MAKER and stored after transparency process (p. 50) cannot be displayed as a P in P image.*

Chroma Key

Chroma key is one of the keying effect where the blue parts of the image are removed, and the remaining parts are combined with another video image. The common example is a TV weather broadcast. You can see the weather reporter in front of a weather map. However, he is actually standing in front of a blue screen, using chroma key to replace the blue portion of the image with the weather map image.



Chroma Key effect requires a blue cloth or paper background behind the subject being photographed.

Precautions in Chroma Key photography

- Make sure that the blue background is sufficiently large for the subject being shot.
- Make sure the background is free of wrinkles and bends, and as flat as possible.
- Adjust the camera so that the edge of the background cannot be seen.
- Make sure the subject is fully illuminated.
- When illuminating the subject, take care to avoid shadows on the background.
- Make sure that the subject itself does not have any blue regions, or they will be cut out as well.

1. The video image photographed in front of the blue background is input to INPUT 2.



We recommend using the S-VIDEO connector to connect the source VCRs, because the blue portion will be removed more completely.

2. Input the image to be combined as the new background to INPUT 1.

This is the MAIN SOURCE.

3. Press [VIDEO 2].

4. Press [CHROMA].

5. Set the video fader to the SUB SOURCE/PICTURE side.

The two images will be combined, with the inset subject (shot in front of the blue background) placed in the foreground against the new background (MAIN SOURCE) image.

If the blue background has not been removed completely, adjust as indicated below:

1. Press [SETUP].

2. Press [CHROMA].

3. Select the item with [◀] and [▶], and then use [+] [-] and the value dial to change the settings.

You can check the results on the monitor while changing the settings.

○ **CHROMA KEY adjustment**

LEVEL: Sets the threshold.

0 to 255

HUE: Sets the hue to be cut out.

0 to 255

* *The HUE page cannot be selected on the V-5 PAL.*

4. Press [SETUP] or [EXIT/NO] to end.

Assigning TRANSITION EFFECTS

Any of the 12 effects can be assigned to TRANSITION EFFECTS [EFFECT 1] and [EFFECT 2]. For a list of internal TRANSITION EFFECTS, refer to p. 97.

1. Press either [EFFECT 1] or [EFFECT 2] to assign the transition effect to.
2. Press [SETUP].
3. Press the effect button you pressed in step 1 again.
4. Use [+] [-] and the value dial to select the effect, while moving the video fader.
You can check the results on the monitor while changing the effects.
5. Press [SETUP] or [EXIT/NO] to end.

Assigning a Different Wipe Pattern to a Button

The factory default settings for WIPE PATTERN buttons [1] to [8] are as shown on the panel, but the V-5 offers an extensive selection of wipe patterns, with 9 patterns in the A group and 254 in the B group. Any of these wipe patterns can be assigned to buttons [1] to [8], for group A and B. Refer to the attached Wipe Patterns List for more information on individual wipe patterns.

1. Press [WIPE].
2. Select GROUP [A] or [B], and then press the wipe pattern [1] to [8] you wish to assign a new wipe pattern to.
3. Press [SETUP].
4. Press the wipe pattern button you pressed in step 2 again.
5. Use [+] [-] and the value dial to select the wipe pattern.
6. Press [ENTER/YES].
The system will begin to load the WIPE pattern. When loading is complete, a message "Complete" will be shown on the display.
Move the video fader and check the results on the monitor.
7. Press [SETUP] or [EXIT/NO] to end.

* *The time it takes to load a wipe pattern varies with the pattern selected.*

* *When a wipe is executed while using TITLE CAMERA/KEY (WHITE LUMI/BLACK LUMI/CHROMA), the wipe pattern boundaries may be seen in the MAIN SOURCE image combined as a background of composite image.*

Programming Sequence for PICTURE/TITLE

The sequence that PICTURE/TITLE file images are displayed in/out to the MAIN SOURCE can be stored (programmed). Once the program has been set, title in/out is handled by just pressing [TITLE IN] or [TITLE OUT], simplifying the editing process. Title in/out can also be controlled from external equipment.

1. Press [SETUP].
2. Press [PGM].
3. Use [+] [-] and the value dial to select the program number.
*1 to *3: Programs stored in the V-5.
m1 to m3: Programs stored in the folder currently selected on the memory card (this option is only displayed when a memory card is inserted).
4. Press [ENTER/YES].
The display will show a message reading "STEP:01."



If a different step number is displayed, press [◀] until step 01 is displayed.

5. Use [+] [-] and the value dial to select the number of the first PICTURE/TITLE file.
*A1 to *C8: Files stored in the V-5.
mA1 to mC8: Files stored in the folder currently selected on the memory card (this option is only displayed when a memory card is inserted).
6. Press [▶] once.
This advances the process one step.
7. Use [+] [-] and the value dial to select the number of the next PICTURE/TITLE file.

Repeat steps 6. and 7. as needed to specify all the PICTURE/TITLE files. Up to 99 steps can be programmed.



The [◀] and [▶] keys can be used to move ahead or back, so steps can be modified at any time.

8. Press [SETUP] or [EXIT/NO] two times.

PICTURE/TITLE In/Out in Programmed Sequence

1. Set the video fader to the MAIN SOURCE side.
2. Press [PGM].
3. Use [+] [-] and the value dial to select the program number.
*1 to *3: Program number from the V-5.
m1 to m3: Program number from the folder currently selected on the memory card (this option is only displayed when a memory card is inserted).
4. Press [ENTER/YES].
The PICTURE/TITLE file programmed in step 01 of the specified program will be loaded.
The display will show the step number and loaded PICTURE/TITLE file number.



You can use the [+] [-] and the value dial to change the step, and check the file number loaded at each step.

5. Press [TITLE IN] when the title is to be inserted, while watching the monitor.
The title will be inserted into the MAIN SOURCE at the speed and transition specified in the file.
6. Press [TITLE OUT] when the title is to be removed.
The title will be removed at the specified speed and parameters, and the file programmed in the next step will be loaded.

Repeat steps 5. and 6. for the required number of program steps.

7. After the last program step, press [EXIT/NO] two times.

[PGM] will go out.



To start a program from any step other than the first, proceed to step **4.** and use the [+] [-] and the value dial to select the step you wish to start from, then press [ENTER/YES]. The specified file will be loaded, and the process advance to step **5.**

- * *A TITLE file made on the PICTURE/TITLE MAKER and stored after transparency process takes longer to load than a normal PICTURE file. If the next step is a TITLE file, remember that TITLE IN is not possible until the TITLE file has been loaded after pressing [TITLE OUT].*
- * *SUB SOURCE cannot be switched during a programmed file in/out sequence.*

Controlling the V-5 from an Edit Controller or Other External Device

External equipment can be used to control the V-5 through General Purpose Interface (GPI).

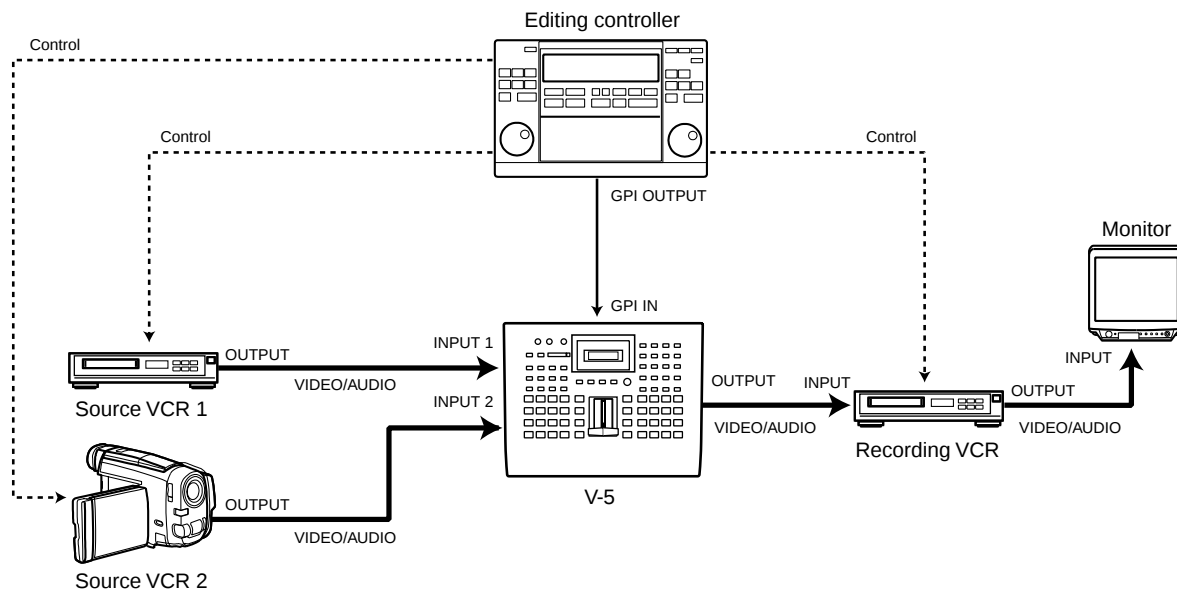
Set the System to Receive GPI Signals

First set [GPI/MIDI IN] to enable reception of GPI signals.

1. Press [SETUP].
2. Press [GPI/MIDI IN].
3. Press [◀] to shown a message reading “REMOTE TRIGGER=.”
4. Use [+] [-] and the value dial to select GPI.
5. Press [SETUP] or [EXIT/NO] to end.

PICTURE/TITLE In/Out through GPI Signals

PICTURE/TITLE images can be transitioned in/out in a programmed sequence through GPI signals when an edit controller or a similar device with a GPI output jack is connected to the GPI IN jack on the rear panel. It is possible for the V-5 to add titles while controlling the source VCRs and a recording VCR through the edit controller.



* The GPI IN jack is a 3.5 mm diameter monaural mini-jack. Use a commercially-available cable fit for connection, after checking the GPI output jack on the equipment to be connected.

* Refer to the edit controller manual for information on outputting GPI signals.

The sequence for the PICTURE/TITLE image output can be programmed in advance (p. 72), and controlled via GPI signals from an edit controller.

1. Set the video fader to the MAIN SOURCE side.
2. Press [PGM].
3. Use [+] [-] and the value dial to select the program number.

*1 to *3: Program number from the V-5.

m1 to m3: Program number from the folder currently selected on the memory card (this option is only displayed when a memory card is inserted).

4. Press [ENTER/YES].

The PICTURE/TITLE file programmed in step 01 of the specified program will be loaded.

5. Press [GPI/MIDI IN].

The button will light, and the V-5 will be ready to receive GPI signals.

6. Send the GPI signal when the title is to be inserted.

The title will be inserted into the MAIN SOURCE at the specified speed and transition.

7. Send the GPI signal when the title is to be removed.

The title will be removed at the specified speed and transition, and the file programmed in the next step will be loaded.

Repeat steps 6. and 7. for the required number of program steps.

8. After the last program step, press [GPI/MIDI IN]. It will go out.

If [PGM] is on, press [EXIT/NO] two times.

* A TITLE file made on the PICTURE/TITLE MAKER and stored after transparency process takes longer to load than a normal PICTURE file. If the next step is a TITLE file, remember that TITLE IN is not possible until the TITLE file has been loaded after TITLE OUT.

* SUB SOURCE cannot be switched during a programmed file in/out sequence.

Controlling the V-5 from a MIDI Device

External MIDI (Musical Instrument Digital Interface) device can be used to control the V-5 through MIDI messages when the MIDI device is connected to the MIDI IN connector on the rear panel. The following three types of control are possible.

1. Receiving the MTC (MIDI time code), PICTURE/TITLE images can be transitioned in/out at the programmed time.

2. The same effect as pressing [TAP] is performed synchronous with the MIDI timing clock.

It controls the tap effects assigned to [USER 1] to [USER 4] synchronous with music tempo.

3. MIDI note messages can be used to turn panel buttons on and off.

About MIDI

What is MIDI?

MIDI stands for Musical Instrument Digital Interface, and is an international standard created to make it possible to swap musical performance, timbre selection and other information between musical instruments and computers.

MIDI channels

MIDI sends data for multiple pieces of MIDI equipment (instruments, etc.) through a single cable. Just like television channels, each piece of equipment only accepts data which is on its own channel. These "MIDI channels" mean that unless both the equipment sending the message and the equipment receiving the message are on the same channel, communication is impossible.

Note messages

These messages are normally used to play notes. For a keyboard, for example, they convey which key (note number) is pressed, and how powerfully (velocity). The note number sets the central DO (C4) as the number 60, and counts in both directions from there for a range from 0 to 127.

Timing clock

This message is sent by MIDI equipment which plays MIDI data at an interval matching the play tempo of the music.

Start/continue/stop

This message indicates play from the start of a track, continue playing or stop playing on MIDI equipment which plays MIDI data.

MTC (MIDI time code)

Gives the current absolute time, expressed as hours, minutes, seconds and frames from the start of the track on MIDI equipment which plays MIDI data.

PICTURE/TITLE In/Out at Times Specified by Time Codes

Set the system to receive MTC

First, setup [GPI/MIDI IN] to receive MTC.

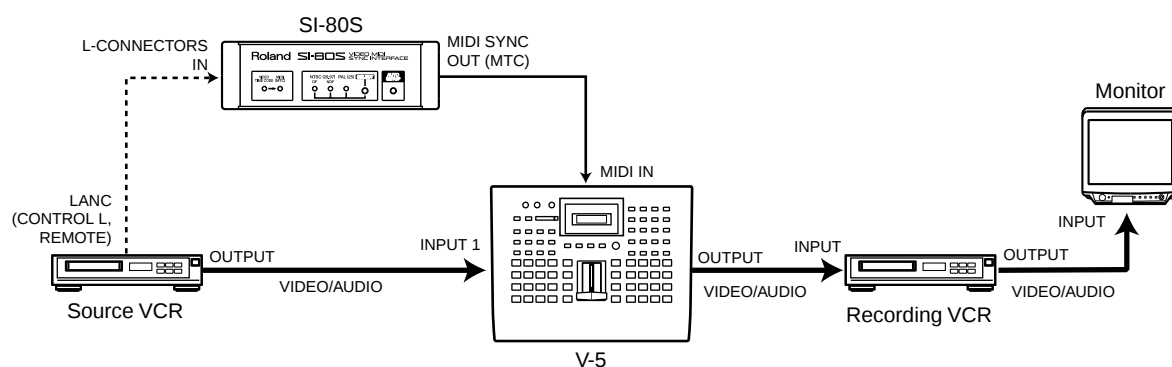
1. Press [SETUP].
2. Press [GPI/MIDI IN].
3. Press [◀] to shown a message reading "REMOTE TRIGGER=."
4. Use [+], [-] and the value dial to select MTC.
5. Press [SETUP] or [EXIT/NO] to end.

Setting time for TITLE IN/OUT in the program

Because TITLE IN/OUT is controlled by the MTC, the specific times for in/out are set in the program.

This example sets the time to match video time codes, using a video equipped with a LANC jack (CONTROL L or REMOTE jack), and an SI-80S VIDEO MIDI SYNC INTERFACE (sold separately).

Connect the equipment as shown below.



- * Set the source VCR to output time codes.
- * Set the SI-80S MTC setting to match the source VCR time codes, NTSC or PAL.
- * For details on setup and connection, refer to owner's manuals of your VCR and the SI-80S.



When using the A-6 DIGITAL MULTI AUDIO STATION or MTC-capable sequencer for controlling the V-5, set MTC to 29.97D or 29D on the A-6 or the sequencer (V-5 NTSC), or set MTC to 25 (V-5 PAL).

The sequence for the PICTURE/TITLE image output can be programmed in advance (p. 72), and the title in/out time specified.

1. Press [GPI/MIDI IN].
The button will light, and the system will be ready to receive MTC.
2. Set the video fader to the MAIN SOURCE side.
3. Press [SETUP].
4. Press [PGM].
5. Use [+] [-] and the value dial to select the program number.

*1 to *3: Program number from the V-5.

m1 to m3: Program number from the folder currently selected on the memory card (this option only displayed when a memory card is inserted).

6. Press [ENTER/YES].

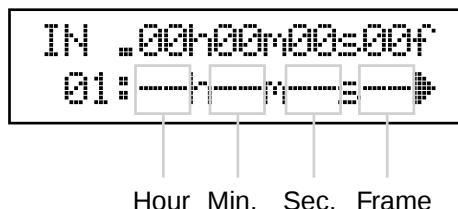
The display will show “STEP: 01” and the loaded PICTURE/TITLE file number will be shown in the lower line.



If a different STEP is displayed, press and hold [◀] to return to step 01.

7. Press [ENTER/YES] again.

The specified file will be loaded and the following message will be shown on the display.



8. Start the source VCR.

9. Press [TITLE IN] when the title is to be inserted, while watching the monitor.

The title-in time will be stored to the program as a time code.

The message “OUT” will be shown in the upper left part of the display.

10. Press [TITLE OUT] when the title is to be removed.

The title-out time will be stored to the program as a time code, and the file programmed in the next step will be loaded.

Repeat steps 9. and 10. for the required number of program steps.

11. Stop the source VCR after the last step is done.

12. Press [UTILITY] or [EXIT/NO] three times.

13. Press [GPI/MIDI IN]. It will go out.

* A TITLE file made on the PICTURE/TITLE MAKER and stored after transparency process takes longer to load than a normal PICTURE file. If the next step is a TITLE file, remember that TITLE IN is not possible until the TITLE file has been loaded after TITLE OUT.

Revising the time set in the program

The stored title in / out times can also be revised.

Use the following procedure to revise the in / out times while viewing video.

1. Press [GPI/MIDI IN].

The button will light, and the system will be ready to receive MTC.

2. Set the video fader to the MAIN SOURCE side.

3. Press [SETUP].

4. Press [PGM].

5. Use [+] [-] and the value dial to select the program number.

*1 to *3: Programs stored in the V-5 system.

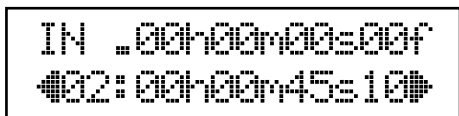
m1 to m3: Programs stored in currently-open folder in the memory card (only when a memory card is inserted).

6. Press [ENTER/YES].

7. Use [◀] and [▶] to select the step to revise.

8. Press [ENTER/YES] again.

The file will be loaded, and the display will change to the following (example shows IN point of step 02 is 45 seconds and 10 frames).



To revise the TITLE OUT time, press [▶] four times, and the message “OUT” will be displayed in the upper left corner of the display.

9. Start the source VCR.

10. Press [TITLE IN] at the correct time to insert the title while watching the monitor, or [TITLE OUT] for title out.

The timing for the title in / out will be changed.

The following step in the program can also be revised in succession. To skip to a step away from the current step in the program, press [EXIT/NO] once. You will return to step 7. above.

11. When editing is complete, stop the video playback.

12. Press [SETUP] or [EXIT/NO] three times.

13. Press [GIP/MIDI IN] and the button will go out.

** [TITLE IN] and [TITLE OUT] will be enabled only when being pressed between the previous and following programmed time. For [TITLE IN] the valid period is from the OUT point of the prior step to the OUT point of the current step, and for [TITLE OUT] the period is from the IN point of the current step to the IN point of the next step.*

It is also possible to revise the time without actually playing back the video.

1. Press [SETUP].

2. Press [PGM].

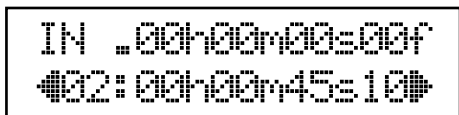
3. Use [+] [-] and the value dial to select the program number.

4. Press [ENTER/YES].

5. Use [◀] and [▶] to select the step to revise.

6. Press [ENTER/YES].

The file will be loaded, and the display will change to the following (example shows IN point of step 02 is 45 seconds and 10 frames).



7. Use [◀] and [▶] to move the cursor to the hour, minute, second or frame, and change the TITLE IN time with [+] [-] and the value dial.

The item which is flashing is revised.

8. Press [▶] some times to advance next to the frame.

The message “OUT” will be displayed in the upper left corner of the display, and the TITLE OUT time will be shown.

9. Use [◀] and [▶] to move the cursor to the hour, minute, second or frame, and change the TITLE OUT time with [+] [-] and the value dial.

10. Press [SETUP] or [EXIT/NO] three times to exit.

- * A TITLE file made on the PICTURE/TITLE MAKER and stored after transparency process takes longer to load than a normal PICTURE file. If the next step is a PICTURE/TITLE file, be sure to take sufficient time for loading between OUT point of the current step and IN point of the next step.
- * TITLE IN/OUT time must be set between the previous and following programmed time. For [TITLE IN] the valid period is from the OUT point of the prior step to the OUT point of the current step, and for [TITLE OUT] the period is from the IN point of the current step to the IN point of the next step.

Executing the program via time codes

This section explains how to control TITLE IN / OUT at programmed times with MTC.



For details on equipment connection and setup, refer to p. 76 “Setting time for TITLE IN / OUT in the program.”

First, set the REMOTE TRIGGER to MTC under [GPI/MIDI IN] setup (p. 76).

Program the PICTURE/TITLE file in/out sequence (p. 72) and times (p. 76), and then control the operation with MTC.

1. Set the video fader to the MAIN SOURCE side.

2. Press [PGM].

3. Use [+] [-] and the value dial to select the program number.

*1 to *3: Program number from the V-5.

m1 to m3: Program number from the folder currently selected on the memory card (this option is only displayed when a memory card is inserted).

4. Press [ENTER/YES].

The PICTURE/TITLE file programmed in step 01 of the specified program will be loaded.

The display will show the step number and loaded PICTURE/TITLE file number.



You can use [+] [-] and the value dial to change the step number and check which file number is loaded at each step. You can also check the in/out times by switching pages with [◀] and [▶].

5. Press [GPI/MIDI IN].

The button will light, and the V-5 will be ready to receive MTC.

6. Start the source VCR.

PICTURE/TITLE images will be transitioned in/out at the times specified by the program.

7. When editing is complete, stop the source VCR.

8. Press [GPI/MIDI IN] again to turn it off.

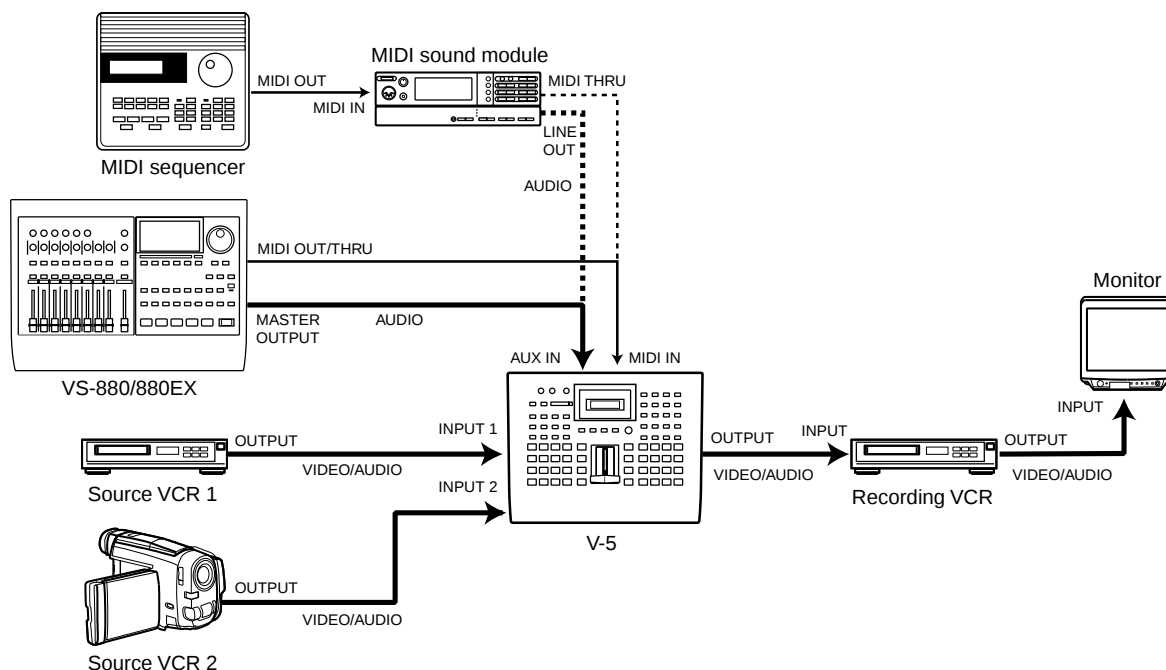
9. Press [EXIT/NO] two times to end performing program.

- * SUB SOURCE cannot be switched during a programmed file in/out sequence.

Using TAP Effects in Time with Music Tempo

This is the same effect as pressing [TAP] in synchronization with the play tempo of the VS-880/880EX DIGITAL STUDIO WORKSTATION or a MIDI sequencer.

This section describes how to control tap effects at the same tempo as the music played on the VS-880/880EX.



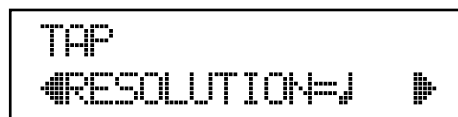
* Set the VS-880/880EX DIGITAL STUDIO WORKSTATION or a MIDI sequencer to output the MIDI timing clock and start/continue/stop messages through the MIDI OUT connector. For details, refer to the VS-880/880EX or MIDI sequencer owner's manual.

Assign the desired tap effects to any of SUB SOURCE VIDEO EFFECTS [USER 1] to [USER 4] as described on p. 67.

Next, set [GPI/MIDI IN] to receive MIDI signals, and set the tap interval.

1. Press [SETUP].
2. Press [GPI/MIDI IN].
3. Press [◀] to show a message reading "REMOTE TRIGGER=."
4. Use [+] [-] and the value dial to select MIDI.
5. Press [▶] once to change the page.

The following display will be shown.



6. Use [+] [-] and the value dial to select the interval.

○ **TAP setting**

RESOLUTION: Specifies the tap interval in notes.

- : A whole note.
- ♩: A half note.
- ♪: A quarter note.
- ♫: A eighth note.

7. Press [SETUP] or [EXIT/NO] to end.
8. Press the button you have assigned a tap effect to, from [USER 1] to [USER 4].
9. Press [GPI/MIDI IN].
The button will light, and the V-5 will be ready to receive MIDI signals.
10. Press the [PLAY] button on the VS-880/880EX to play back the music.
When playback starts, the tap effect will be applied to the SUB SOURCE at the specified note interval.

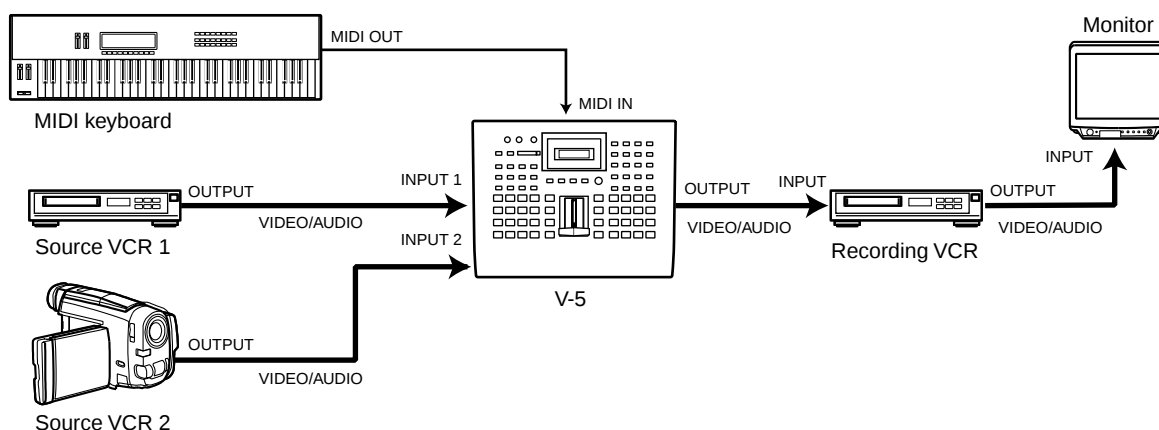


To record a video with tap effects applied, set the video fader to the SUB SOURCE side.

11. Press the VS-880/880EX [STOP] button to stop playback.
The tap effect will no longer be applied.
12. Press [GPI/MIDI IN] and the button will go out.

Controlling the V-5 via MIDI Keyboard

The keys (note numbers) of a MIDI keyboard (electronic piano, synthesizer, etc.) can be used as buttons to turn panel buttons on and off through MIDI note messages.



* Set the MIDI keyboard to output MIDI note messages from MIDI OUT. For details, refer to the MIDI keyboard owner's manual.

First set [GPI/MIDI IN] to enable the V-5 to receive MIDI signals, then set the MIDI channel and assign functions to note numbers.

1. Press [GPI/MIDI IN].
2. Press [SETUP].
3. Press [GPI/MIDI IN] again.
4. Press [◀] to show a message reading "REMOTE TRIGGER=."
5. Use [+] [-] and the value dial to select MIDI.

6. Press [▶] to change the page, and show a message reading “MIDI CONTROL MIDI Ch=.”

7. Use [+] [-] and the value dial to select the MIDI channel.

Select the same MIDI channel as that used by the MIDI keyboard.



When the channels are the same, pressing a keyboard key will make a sound, and the note will be shown on the display while [GPI/MIDI IN] turns on.

8. Press [▶] once to change the page.

The display will show a message reading “SETUP MIDI NOTE Setup?”

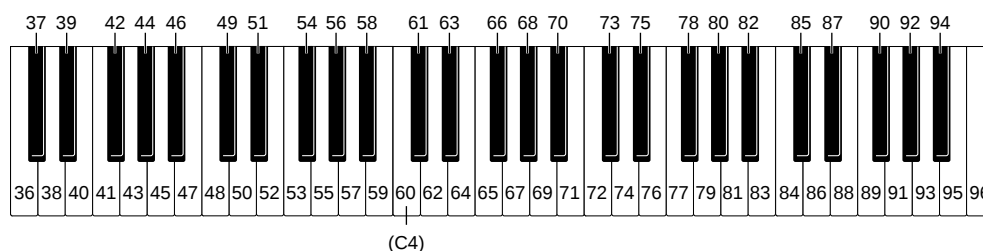
9. Press [ENTER/YES].

The following display will be shown.



10. Use [◀] and [▶] to change the note numbers, and then use [+] [-] and the value dial to select the function to assign to that note number.

Use note numbers in the range from 36 to 96. For functions which can be assigned, refer to p. 100 “Functions Controllable from External MIDI Device.”



When a keyboard key is pressed, the page will change to match that note number.

11. Press [SETUP] or [EXIT/NO] two times to end.

12. Make sure [GPI/MIDI IN] lights.

13. Press the keyboard key assigned to the desired function.

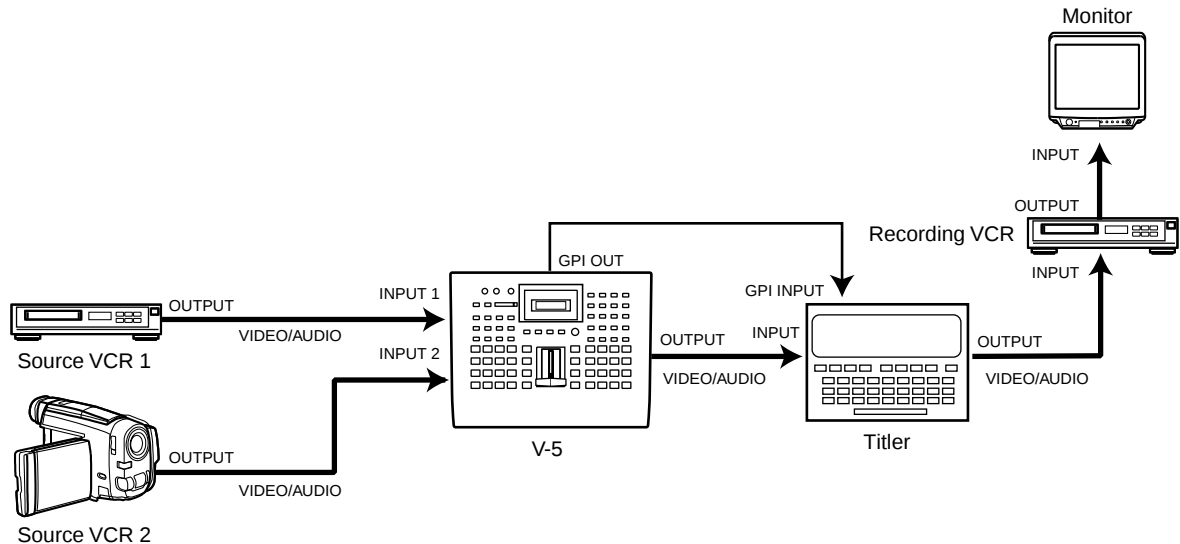
The note number corresponding to that key will be sent from the keyboard, and the assigned function will be activated.

14. Press [GPI/MIDI IN]. The button will go out, and processing will end.

Controlling an External Edit Device via GPI

When [GPI OUT] is pressed, GPI signals are output through the GPI OUT jack on the rear panel. It is possible to use the V-5 to control video editing equipment like titlers, which has a GPI input jack, and the DIGITAL MULTI AUDIO STATION A-6.

(Example 1) Inserting a title created on a titler during editing



**The GPI OUT jack is a 3.5 mm diameter monaural mini-jack. Check the GPI input jack on the equipment to be connected, and use an appropriate commercial cable.*

The V-5 can use two video tapes for editing and combining images, while inserting titles made on a titler as required.

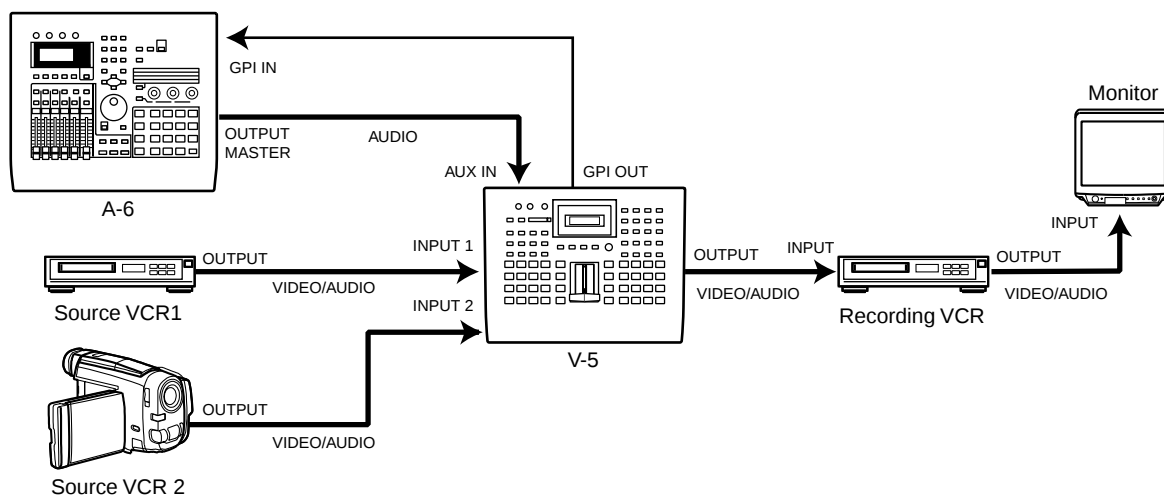
- 1. Make titles on the titler, put them in play sequence, and make the necessary in/out settings.**

For details, refer to the titler manual.

- 2. Press [GPI OUT] at the place in the image you wish to insert a title.**

The titles from the titler will be transitioned in / out in the specified order.

(Example 2) Controlling the A-6



- * Set the A-6 to receive GPI signals, and select the function to be controlled by the GPI signals. For details, refer to the A-6 owner's manual.
- * For connection use a commercial cable with a 3.5 mm diameter monaural miniplug on one end and a standard 6.5 mm diameter monaural phone plug on the other.

GPI signals can be used to control three A-6 functions, but in combination with the V-5 functions **1.** and **2.** are the most effective.

1. Playing back and stopping a project.

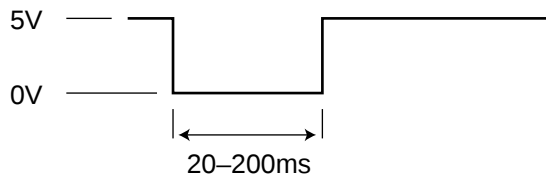
Pressing [GPI OUT] can start and stop playback of music on the A-6, for use as background music.

2. Playing specified clips for each pad group.

Sound effects can be played. Press [GPI OUT] at the right time, while watching the monitor.

3. The function is the same as the [REC] button.

You can set the pulse width of the output GPI signal to match the specifications of the equipment being controlled.



1. Press [SETUP].

2. Press [GPI OUT].

3. Use [+] [-] and the value dial to change the value.

○ GPI OUT pulse setting

WIDTH: Sets the pulse width of the output GPI signal.

20 to 200 ms

4. Press [SETUP] or [EXIT/NO] to end.

Managing PICTURE/TITLE Files

It is possible to copy, exchange or clear PICTURE/TITLE files. These functions are handy when changing the sequence of files to be used in video editing, or to group files for each production, for example.

Operations can be performed in file, file group or folder (when using a memory card) units. When using a memory card, operations can be performed not only between internal files or file groups in the V-5, but also between the selected folder (p. 57) in the memory card and internal memory.

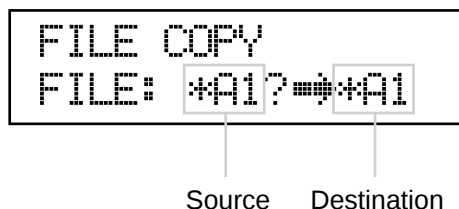
* If there is insufficient memory capacity it may be impossible to complete an operation. In this case, clear one or more unneeded files and try again.

Operations between Files

The following five operations can be performed between PICTURE/TITLE files stored in the V-5 or in the selected folder (if a memory card is used).

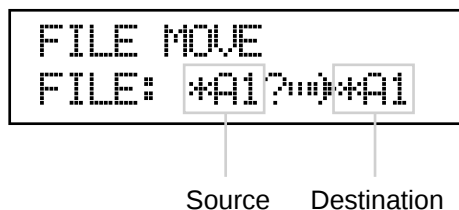
To execute an operation, specify the two files to be operated on in order (only one file is specified for clear).

○ COPY



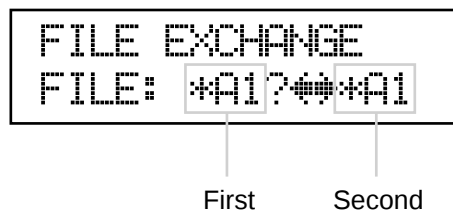
Copy the source file to the destination file number. The source file will be duplicated at the specified destination. If a file already exists in the destination file number, that file will be deleted, and the duplicate file will be stored in its place.

○ MOVE



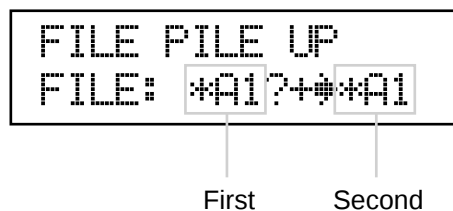
Move the source file to the destination file number. The source location will become empty. If a file already exists in the destination file number, that file will be deleted, and the source file will be stored in its place.

○ EXCHANGE



Switch the locations of two files.

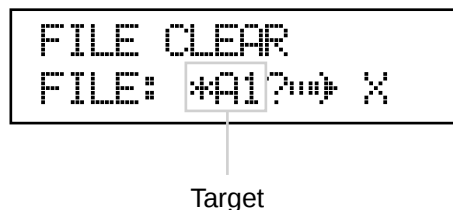
○ PILE UP



The images of the two specified files are overlaid to create a single file, and stored to the location of the second file. The file originally stored in the second location is deleted, and replaced with the new overlaid image file.

* Can only be executed when the 1st file is a TITLE file.

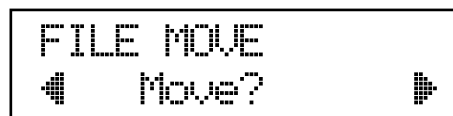
○ CLEAR



Clear the specified file, leaving that location empty.

These operations are carried out through the following procedures.

1. Press [SETUP].
2. Press the file number [1] through [8].
3. Select the operation with [◀] and [▶].



FILE FILE UP

File up?

FILE CLEAR

Clear?

4. Press [ENTER/YES].

The display will change to the file select screen. The file number on the left of the lower "FILE" line will flash.

FILE COPY

FILE: *A1?→*A1

FILE MOVE

FILE: *A1?→*A1

FILE EXCHANGE

FILE: *A1?↔*A1

FILE FILE UP

FILE: *A1?→*A1

FILE CLEAR

FILE: *A1?→ X

5. Use [+] [-] and the value dial to select the first file.

*A1 to *C8: Files stored in the V-5.

mA1 to mC8: Files stored in the folder which is currently selected in the memory card (only displayed when a memory card is inserted).

6. Press [ENTER/YES].

The file number on the right will flash.

7. Use [+] [-] and the value dial to select the second file.

8. Press [ENTER/YES].

Check the specified file numbers.

9. Press [ENTER/YES].

The operation will be executed, and then the screen will return to step 3.

* When clearing a file, steps 6. and 7. are not needed.



The file numbers in steps 5. and 7. can also be specified by pressing [MEMORY CARD], file group [A] to [C], and file numbers [1] to [8].



Press [EXIT/NO] at any time during steps 3. to 8. to return to the prior step.

Operations between File Groups

The following four operations can be performed between PICTURE/TITLE file groups in the V-5 or the currently-selected folder (when a memory card is used).

To execute an operation, specify the two groups to be operated on in order (only one is specified for clear).

○ COPY

GROUP COPY

GROUP: *A?→*A

Source Destination

Copy files 1 to 8 from the source group to the destination group. The files will be duplicated in the destination group. If there are already files in the specified destination group, they will be deleted, and replaced with the duplicate files.

○ MOVE

GROUP MOVE

GROUP: *A?→*A

Source Destination

Move files 1 to 8 from the source group to the destination group. The files will be stored in the destination group, and the source group will become empty. If there are already files in the specified destination group, they will be deleted, and replaced with the files in the source group.

○ EXCHANGE

GROUP EXCHANGE

GROUP: *A?↔*A

First Second

All files will be exchanged between the two specified groups.

○ CLEAR

```
GROUP CLEAR
GROUP: *A?> X
```

Target

Clear all files in the specified group.

These operations are performed through the following procedures.

1. Press [SETUP].
2. Select GROUP [A] to [C].
3. Select the group operation with [◀] and [▶].

```
GROUP COPY
Copy? ▶
```

```
GROUP MOVE
◀ Move? ▶
```

```
GROUP EXCHANGE
◀ Exchange? ▶
```

```
GROUP CLEAR
◀ Clear? ▶
```

4. Press [ENTER/YES].

The display will change to the group select screen. The group name on the left of the lower "GROUP" line will flash.

```
GROUP COPY
GROUP: *A?=>*A
```

```
GROUP MOVE
GROUP: *A?=>*A
```

```
GROUP EXCHANGE
GROUP: *A?=>*A
```

```
GROUP CLEAR
GROUP: *A?> X
```

5. Use [+] [-] and the value dial to select the first group.

*A to *C: Groups stored in the V-5.

mA to mC: Groups stored in the folder which is currently selected in the memory card (only displayed when a memory card is inserted).

6. Press [ENTER/YES].

The group name on the right will flash.

7. Use [+] [-] and the value dial to select the second group.

8. Press [ENTER/YES].

Check the specified groups.

9. Press [ENTER/YES].

The operation will be executed, and then the screen will return to step 3..

* When clearing a group, steps 6. and 7. are not needed.



The file groups in steps 5. and 7. can also be specified by pressing [MEMORY CARD] and file group [A] to [C].



Press [EXIT/NO] at any time during steps 3. to 8. to return to the prior step.

Operations between Folders

When a memory card is inserted, the following four operations can be performed between the V-5 internal memory and folders in the memory card.



When the V-5 memory is selected, the entire memory capacity is treated as a single folder. Note that the V-5 memory cannot be selected for clear, however.

To execute an operation, specify the two folders to be operated on in order (only one is specified for clear).

○ COPY

```
FOLDER COPY
FOLDER: 01?=>01
```

Source Destination

Copy all files from the source folder to the destination folder. The files will be duplicated in the destination folder. If there are already files in the specified destination folder, they will be deleted, and replaced with the duplicate files.

○ MOVE

```
FOLDER MOVE
FOLDER: 01?→01
```

Source Destination

Move files from the source folder to the destination folder. The files will be stored in the destination folder, and the source folder will become empty. If there are already files in the specified destination folder, they will be deleted, and replaced with the files in the source folder.

○ EXCHANGE

```
FOLDER EXCHANGE
FOLDER: 01?↔01
```

First Second

All files will be exchanged between the two specified folders.

○ CLEAR

```
FOLDER CLEAR
FOLDER: 01?→X
```

Target

Clear all files in the specified folder.

These operations are performed through the following procedures.

1. Press [SETUP].
2. Press [MEMORY CARD].
3. Select the folder operation with [◀] and [▶].

```
FOLDER COPY
◀ Copy? ▶
```

```
FOLDER MOVE
◀ Move? ▶
```

```
FOLDER EXCHANGE
◀ Exchange? ▶
```

```
FOLDER CLEAR
◀ Clear? ▶
```

4. Press [ENTER/YES].

The display will change to the folder select screen. The folder number on the left of the lower "FOLDER" line will flash.

```
FOLDER COPY
FOLDER: 01?→01
```

```
FOLDER MOVE
FOLDER: 01?→01
```

```
FOLDER EXCHANGE
FOLDER: 01?↔01
```

```
FOLDER CLEAR
FOLDER: 01?→X
```

5. Use [+] [-] and the value dial to select the first folder.

The "V5" represents the V-5 internal memory.

* The V-5 internal memory cannot be selected for clear.

6. Press [ENTER/YES].

The folder number on the right will flash.

7. Use [+] [-] and the value dial to select the second folder.

8. Press [ENTER/YES].

Check the specified folder numbers.

9. Press [ENTER/YES].

The operation will be executed, and then the screen will return to step 3.

* When clearing a folder, steps 6. and 7. are not needed.



Press [EXIT/NO] at any time during steps 3. to 8. to return to the prior step.

Managing Programs

Programs can be managed by copying, exchanging or clearing them. A new program can be easily created by copying an existing program and making a few changes to reflect the new requirements.

When using a memory card, operations can be performed not only on programs in the V-5, but also in the selected folder (p. 57) in the memory card.

* If there is insufficient memory capacity it may be impossible to complete an operation. In this case, clear one or more unneeded files or programs and try again.

The following five operations can be performed between programs stored in the V-5 or in the selected folder (if a memory card is used).

To execute an operation, specify the two programs to be operated on in order (only one is specified for clear and MTC clear).

○ COPY

```
PROGRAM COPY
PROGRAM: *1?=>*1
```

Source Destination

Copy the source program to the destination program number. The source program will be duplicated at the specified destination. If a program already exists in the destination program number, that program will be deleted, and the duplicate program will be stored in its place.

○ MOVE

```
PROGRAM MOVE
PROGRAM: *1?=>*1
```

Source Destination

Move the source program to the destination program number. The source location will become empty. If a program already exists in the destination program number, that program will be deleted, and the source program will be stored in its place.

○ EXCHANGE

```
PROGRAM EXCHANGE
PROGRAM: *1?<=>*1
```

First Second

Switch the locations of two programs.

○ CLEAR

```
PROGRAM CLEAR
PROGRAM: *1?=> X
```

Target

Clear the specified program, leaving that location empty.

○ MTC CLEAR

```
MTC CLEAR
PROGRAM: *1?=> X
```

Target

Clear only the MTCs set in the specified program. The file number specified in each step is not affected.

These operations are carried out through the following procedures.

1. Press [SETUP].
2. Press [PGM].
3. Select the operation with [◀] and [▶].

```
PROGRAM COPY
◀ Copy? ▶
```

```
PROGRAM MOVE
◀ Move? ▶
```

```
PROGRAM EXCHANGE
◀ Exchange? ▶
```

PROGRAM CLEAR

◀ Clear? ▶



Press [EXIT/NO] at any time during steps **3.** to **8.** to return to the prior step.

MTC CLEAR

◀ Clear?

4. Press [ENTER/YES].

The display will change to the program select screen. The program number on the left of the lower “PROGRAM” line will flash.

PROGRAM COPY

PROGRAM: *1? → *1

PROGRAM MOVE

PROGRAM: *1? → *1

PROGRAM EXCHANGE

PROGRAM: *1? → *1

PROGRAM CLEAR

PROGRAM: *1? → X

MTC CLEAR

PROGRAM: *1? → X

5. Use [+] [-] and the value dial to select the first program.

***1 to *3:** Programs stored in the V-5.

m1 to m3: Programs stored in the folder which is currently selected in the memory card (only displayed when a memory card is inserted).

6. Press [ENTER/YES].

The program number on the right will flash.

7. Use [+] [-] and the value dial to select the second program.

8. Press [ENTER/YES].

Check the specified program numbers.

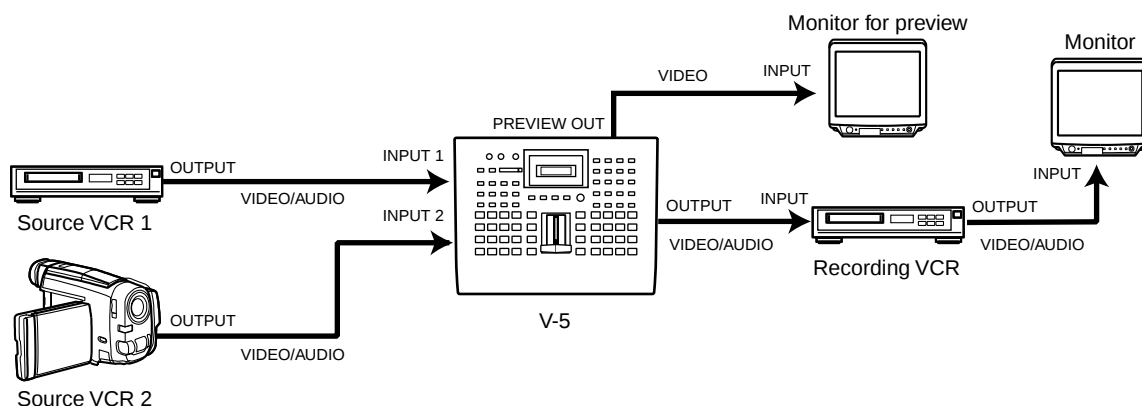
9. Press [ENTER/YES].

The operation will be executed, and then the screen will return to step **3.**

* When clearing a program or MTC, steps **6.** and **7.** are not needed.

Other Functions

Checking the Next Image before Transition (PREVIEW OUT)



* The PREVIEW OUT jack is an RCA phono jack. Connect with a commercial video cable.

When the transition control is used to select one video stream for output through the OUTPUT jack, the other stream (the opposite side on the video fader) is output through the PREVIEW OUT jack on the rear panel. If a second television is connected in addition to the monitor, it is possible to view the next image to be output before actually outputting it.

* The PREVIEW OUT image is unaffected by MIX or WIPE transition, and when Picture in Picture is to be used the SUB SOURCE output through the PREVIEW OUT will show only the inset picture.

* The coloring of the PREVIEW OUT image will be slightly different than that of the OUTPUT jack image.

Selecting Linkage between the Video Fader and Image (Video Fader Mode)

After transition without moving the video fader, such as through AUTO, the video fader position and the output image will not match. You can select the way to match the fader position with the image starting from that state.

1. Press [UTILITY].
2. Use [◀] and [▶] to show the message reading "VIDEO FADER MODE."
3. Use [+] [-] and the value dial to set the mode.

○ VIDEO FADER MODE

MODE: When the video fader position and the image do not match, this sets the video transition when the video fader is moved.

NORMAL: The image does not change when the video fader is moved, unless the video fader is moved to the position according to the output image. When it reaches the position, the video fader and the image match.

QUICK: When the video fader is moved even a little bit the corresponding image is immediately output, and the video fader and image match.

4. Press [UTILITY] or [EXIT/NO] to end.

Protecting Data Stored in the V-5

It is possible to write-protect the V-5 internal memory to prevent accidental deletion of PICTURE/TITLE files and programs.

1. Press [UTILITY].
2. Use [◀] and [▶] to show the message reading "DATA PROTECT."
3. Press [ENTER/YES].
The display will show a message reading "PROTECT=."
4. Use [+] [-] and the value dial to turn protection on/off.

○ DATA PROTECT

PROTECT: Enables / disables writing of files and programs to the V-5 internal memory.

OFF: Write enabled (data may be deleted).

ON: Write disabled (data is protected).

5. Press [UTILITY] or [EXIT/NO] two times to end.

Protecting Data Stored in a Memory Card

It is possible to write-protect a memory card to protect data, as the V-5 internal memory can be protected.

1. Press [UTILITY].
2. Use [◀] and [▶] to show the message reading "MEM-CARD PROTECT."
3. Press [ENTER/YES].
The display will show a message reading "PROTECT=."
4. Use [+] [-] and the value dial to turn protection on/off.

○ MEMORY CARD PROTECT

PROTECT: Enables / disables writing of files and programs to memory card.

OFF: Write enabled (data may be deleted).

ON: Write disabled (data is protected).



The display will show " - - " unless a memory card is inserted.

5. Press [UTILITY] or [EXIT/NO] two times to end.

Turning the Button Beep On/Off

The buttons can be set to make an audible "Beep" when pressed, or not.

1. Press [UTILITY].
2. Use [◀] and [▶] to show the message reading "SW BEEP SOUND."
3. Use [+] [-] and the value dial to set on/off.

○ SWITCH BEEP SOUND

SOUND: Sets whether buttons make a beep when pressed, or not.

OFF: Buttons are silent when pressed.

ON: Buttons issue a beep when pressed.

4. Press [UTILITY] or [EXIT/NO] to end.

Demonstration

The V-5 can introduce its major functions to you automatically.

1. Press [UTILITY].
2. Use [◀] and [▶] to show the message reading "V-5 AUTO DEMO."
3. Press [ENTER/YES].

The demonstration will run automatically.

You can end the demonstration by the following operation.

1. Press [UTILITY] or [EXIT/NO] during the demonstration.
The display will show a message reading "Push [NO] Stop."
2. Press [EXIT/NO].

The demonstration will end, and the V-5 will return to its normal operation state.



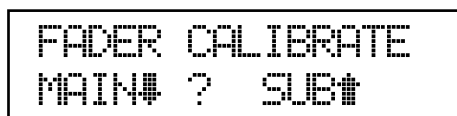
If you do not press [EXIT/NO] within a few seconds after the "Push [NO] Stop" message is displayed, the demonstration will continue automatically.

Video Fader Calibration

If the previous image does not completely disappear in transition even though the video fader is moved completely to the end of its slot, the video fader requires calibration. Use the following procedure to calibrate.

1. Press [UTILITY].
2. Use [◀] and [▶] to display the message reading "VIDEO FADER Calibrate?"
3. Press [ENTER/YES].

The following screen will be shown on the display.



4. Move the video fader gently to the MAIN SOURCE side.
Be sure not to apply excessive force.
5. Press [ENTER/YES].
The MAIN side of the display will show a message reading "OK," and a "?" will flash on the SUB side.
6. Move the video fader gently to the SUB SOURCE side.
Be sure not to apply excessive force.
7. Press [ENTER/YES].
Both MAIN and SUB sides of the display will show messages reading "OK," and then the message will turn to "Complete." Calibration is complete when the message automatically returns to "VIDEO FADER Calibrate?"



If a message reading "Error" is displayed and the display automatically returns to the above screen in step 3., repeat steps 4. through 7. again. If the "Error" message is repeated after following the specified procedure, contact the nearest Roland/EDIROL Service Center.

8. Press [UTILITY] or [EXIT/NO] to end.

Troubleshooting

If the device does not function as you expect, first check the following points. If that still doesn't work, then contact your dealer or the nearest Roland/EDIROL Service Center.

○ When the power is turned on the system automatically applies transitions or effects

- The AUTO DEMO PLAY function is on.
 - Press [UTILITY] or [EXIT/NO], and when "Push [NO] Stop" is shown on the display, press [EXIT/NO] (p. 93).

○ Output video is not stable

- The output signal will not be stable unless the video equipment connected to INPUT 1 supplies a stable sync signal.
 - Connect a video equipment to INPUT 1 which supplies a stable sync signal (p. 15).
- Are you trying to input a signal from a game system or other special equipment?
 - Some game systems do not output stable video streams.

○ Cannot select the SUB SOURCE

- The [PGM] button is lit.
 - While PICTURE/TITLE files are being transitioned in/out under program control, SUB SOURCE cannot be selected.
 - Press [EXIT/NO] two times to turn [PGM] out (p. 72).

○ Audio from video source is not being output

- The [AUX INS] button is lit.
 - Press [AUX INS] to turn it out (p. 36).
- The [AUTO FADE] button is lit.
 - If AUDIO LINK has been set ON in the AUTO FADE setting, the audio signal is faded out.
 - Press [AUTO FADE] to turn it out (p. 24).
 - Press [SETUP] and [AUTO FADE], use [▶] to select the AUDIO LINK page, then turn AUDIO LINK OFF (p. 60).
- AUDIO input select is set to OFF in MAIN SOURCE or VIDEO 1/2 setup.
 - Press [UTILITY], use [▶] to select the MAIN SOURCE setup page, then press [ENTER/YES]. Use [▶] to select the AUDIO input select page, and set AUDIO to INPUT 1 (p. 47).
 - Press [SETUP], [VIDEO 1] (or [VIDEO 2]), select the AUDIO input select page with [◀], and set AUDIO to INPUT 1 (or INPUT 2) (p. 48).

○ Output volume on audio from source is too low

- [AUX MIX] is lit.
 - Press [AUX MIX] and it will go out (p. 37).

○ The audio source does not switch when you move the video fader

- [AUDIO FOLLOW] is not lit.
 - Press [AUDIO FOLLOW] and it will go on (p. 46).
- The AUDIO input select setting is different from the VIDEO input select setting in MAIN SOURCE settings or VIDEO 2 settings.
 - Press [UTILITY], select the MAIN SOURCE page with [▶], and press [ENTER/YES]. Select the AUDIO input select page with [▶], and set AUDIO to INPUT 1 (p. 47).
 - Press [SETUP] and [VIDEO 2], select the AUDIO input select page with [◀], and set AUDIO to INPUT 2 (p. 48).

○ Captured still image is blurred

- The captured image may be blurred if you capture a video with rapid motion.
 - Press [SETUP] and [CAPTURE], select the STABILIZE setup page with [◀], and set STABILIZE to ON (p. 50).

○ Captured still image is coarse or of generally low quality

- STABILIZE is set to ON in CAPTURE setup.
When STABILIZE is set to ON, image quality drops.
→ Press [SETUP] and [CAPTURE], select the STABILIZE setup page with [◀], and set STABILIZE to OFF (p. 50).
- A better image quality can be obtained by QUALITY selection in the CAPTURE setup.
→ Press [SETUP] and [CAPTURE], select the QUALITY select page with [▶], and set QUALITY to FINE (p. 50).

○ Keying doesn't work (White Luminance Key, Black Luminance Key or Chroma Key)

- The key threshold LEVEL is set too high or low.
→ Press [SETUP] and [WHITE LUMI] ([BLACK LUMI] or [CHROMA]), and use [◀] to select the LEVEL setup page for Chroma Key, and adjust the LEVEL properly (p. 32, 70).

○ [TITLE IN] and [TITLE OUT] don't work

- [TITLE IN] and [TITLE OUT] only work when [PICTURE/TITLE] is lit and the video fader is on the MAIN SOURCE side, or when [PGM] is lit.
→ Press [PICTURE/TITLE] to light it, and move the video fader to the MAIN SOURCE side (p. 29).
→ Press [PGM], select the program number, and press [ENTER/YES] (p. 72).

○ When [TITLE IN] is executed the TITLE/PICTURE still image is displayed, but it is not combined with the MAIN SOURCE

- Are FILE IN / OUT settings for KEY TYPE and KEY LEVEL suitable?
→ Press [SETUP], select the PICTURE/TITLE number ([1] to [8]), use [◀] to select the FILE IN / OUT setting page, and press [ENTER/YES]. Use [▶] to select the KEY TYPE select page, and set the KEY TYPE to WHITE LUMI, BLACK LUMI or CHROMA. Press [▶] and set the KEY LEVEL on the KEY LEVEL page (p. 54).

○ Cannot set MTC in the program

- Is the time you are trying to set between the previous and following programmed time?
For [TITLE IN] the valid period is from the OUT point of the prior step to the OUT point of the current step, and for [TITLE OUT] the valid period is from the IN point of the current step to the IN point of the next step.
→ Change the previous or following time. Press [SETUP] and [PGM], select the program number, and press [ENTER/YES]. Use [◀] and [▶] to select the step to change, and press [ENTER/YES]. Use [◀] and [▶] to move to the hour, minute, second or frame item and edit the time as needed (p. 78).

○ PICTURE/TITLE file or program managing operations (copy, move, etc.) are not possible

- If there is not sufficient remaining memory capacity the command cannot be executed.
→ Press [SETUP] and the file number (or [PGM]), use [▶] to select the FILE (or PROGRAM) CLEAR page, and press [ENTER/YES]. Specify the file (or program) you no longer need, and press [ENTER/YES] twice (p. 85, 89).

○ The PC image does not show correctly on the monitor

- Check the PC display settings (for details, refer to your PC user's manual).
Input an VGA or RGB signal as detailed below.

Resolution	H-SYNC	V-SYNC
640 x 480 dots	31.5 kHz	60 Hz (VGA equivalent)
640 x 400 dots	24.8 kHz	53 Hz
- Does the MODE setup in PC image settings match the actual PC display settings?
→ Press [SETUP] and [PC]. Use [▶] to select the MODE page, and set the MODE to match the PC display settings (p. 62).

○ The top and bottom of the image from the PC are cut off. The image is longer vertically than original. There are black regions on both sides.

- The aspect ratio of the PC display is different from that of the television. This is normal, and not a problem with your equipment.

Supplementary Information

Color Palette

The Color Palette includes 48 palette presets, and also 10 user colors which can be set with any colors specified by the user (see p. 51 for set-up). The Color Palette can be used in the following functions:

- (1) TITLE CAMERA / KEY color (p. 34)
- (2) CENTER IMAGE color (p. 66)
- (3) NEGA color (p. 65)
- (4) COLOR INSERT color (p. 44)
- (5) PinP border color (p. 68)
- (6) PICTURE / TITLE MAKER color (p. 51)

* The above colors are selected from the Color Palette, but the same palette is used by all 6 functions above. Colors can be set individually, but if some functions with different color settings are executed at the same time, only the color set on the latest processed function is valid and used in common at that moment. Individual settings are temporary ignored.

* Colors with numbers following the color names on the display indicate assumed basic colors close to the specified colors, and the color name and the resulting color may not match perfectly.

No.	Value			Display	Color (for reference only)
	Red	Green	Blue		
P01	0	0	0	P01:BLACK	Black
P02	25	25	25	P02:90% BLACK	Black (black 90%)
P03	128	128	128	P03:50% BLACK	Gray (black 50%)
P04	204	204	204	P04:20% BLACK	Gray (black 20%)
P05	255	255	255	P05:WHITE	White 100%
P06	255	0	0	P06:RED	Red
P07	128	0	0	P07:DEEP RED	Deep red
P08	64	0	0	P08:DARK RED	Dark red
P09	255	155	0	P09:ORANGE	Orange
P10	128	64	0	P10:BROWN	Brown
P11	255	155	85	P11:LT ORANGE	Light orange
P12	255	255	0	P12:YELLOW	Yellow
P13	255	255	128	P13:PL YELLOW	Pale light yellow
P14	128	128	64	P14:DULL Y&G	Dull yellow-green
P15	128	128	0	P15:DEEP Y&G	Deep yellow-green
P16	0	255	0	P16:GREEN	Green
P17	128	255	0	P17:YL GREEN	Yellow-green
P18	0	128	0	P18:DP GREEN	Deep green
P19	0	64	0	P19:DK GREEN	Dark green
P20	0	255	64	P20:LIGHT B&G	Light blue-green
P21	0	128	64	P21:DULL B&G	Dull blue-green
P22	128	255	128	P22:MINT GRN	Mint green
P23	0	255	128	P23:PALE B&G	Pale blue-green
P24	0	0	255	P24:BLUE	Blue
P25	0	0	160	P25:DEEP BLUE	Deep blue
P26	0	0	128	P26:DP BLUE2	Deep blue 2
P27	0	0	64	P27:DARK BLUE	Dark blue
P28	64	128	128	P28:MOSS GRN	Moss green
P29	0	64	128	P29:DEEP B&G	Deep blue-green
P30	0	128	255	P30:SKY BLUE	Sky blue
P31	0	64	64	P31:SMOKE BLU	Smoke blue
P32	0	255	255	P32:ICE BLUE	Ice blue
P33	128	255	255	P33:ICE BLUE2	Light ice blue
P34	0	128	128	P34:OCEAN GRN	Ocean green
P35	0	128	192	P35:SKY BLUE2	Sky blue 2
P36	128	0	255	P36:BL PURPLE	Blue purple
P37	64	0	128	P37:DP PURPLE	Deep purple
P38	128	128	255	P38:LT PURPLE	Light pale purple
P39	128	0	128	P39:PLUM	Plum
P40	128	128	192	P40:PASTEL BL	Pastel blue

No.	Value			Display	Color (for reference only)
	Red	Green	Blue		
P41	64	0	64	P41:DK PURPLE	Dark purple
P42	128	0	64	P42:RUBY RED	Dull red-purple
P43	255	0	255	P43:MAGENTA	Magenta
P44	255	0	128	P44:NEON RED	Neon red
P45	255	128	192	P45:PINK	Pink
P46	170	85	85	P46:LT BROWN	Light brown
P47	255	128	255	P47:LT VIOLET	Light violet, lilac
P48	255	128	128	P48:PEACH	Peach

User Colors

(The factory settings are shown below, but you may change values freely.)

No.	Value			Display	Color
	Red	Green	Blue		
U01	0	0	0	U01:U-COLOR1	Black
U02	255	0	0	U02:U-COLOR2	Red
U03	0	255	0	U03:U-COLOR3	Green
U04	0	0	255	U04:U-COLOR4	Blue
U05	255	153	204	U05:U-COLOR5	Pink
U06	0	255	255	U06:U-COLOR6	Water blue
U07	225	225	0	U07:U-COLOR7	Yellow
U08	255	255	255	U08:U-COLOR8	White
U09	255	102	0	U09:U-COLOR9	Orange
U10	255	0	255	U10:U-COLOR10	Magenta

TRANSITION EFFECTS List

When executing a TRANSITION between the MAIN SOURCE image and the SUB SOURCE image, it is possible to insert a SUB SOURCE image with special effects applied between them.

The following special effects can be assigned to [EFFECT 1] and [EFFECT 2] in the TRANSITION EFFECTS block (p. 71).

Display	TRANSITION EFFECTS description
01: STROBE	A STROBE is applied to the SUB SOURCE, and the TRANSITION executed.
02: STILL	A STILL image is captured from the SUB SOURCE and used for TRANSITION.
03: SOLARIZE	The SUB SOURCE image is solarized, and the TRANSITION executed while varying the SOLARIZE LEVEL.
04: COLORIZE	The SUB SOURCE image is colorized, and the TRANSITION executed while varying the COLORIZE LEVEL.
05: SEPIA	SEPIA is applied to the SUB SOURCE image, and intensified as the SUB SOURCE image becomes more dominant.
06: NEGA	The SUB SOURCE image is converted to a negative, and the TRANSITION executed while varying the NEGA COLOR RATIO.
07: CENTER IMG	CENTER IMAGE is applied to the SUB SOURCE image, and the TRANSITION executed while varying the CENTER IMAGE LEVEL.
08: SHUTTER	TRANSITION is executed like a camera shutter.
09: WHITE LUM1	Replacing the light regions of the SUB SOURCE image with the MAIN SOURCE image during TRANSITION.
10: WHITE LUM2	Color is applied to the dark regions of the SUB SOURCE image during TRANSITION.
11: BLACK LUM1	Replacing the dark regions of the SUB SOURCE image with the MAIN SOURCE image during TRANSITION.
12: BLACK LUM2	Color is applied to the light regions of the SUB SOURCE image during TRANSITION.

SUB SOURCE VIDEO EFFECTS List

It is possible to apply special effects to the SUB SOURCE (VIDEO 1, VIDEO 2, PC).

These effects can be used to emphasize the content you wish to express, to inspire powerful imagery not possible with normal image alone, and to create moving, dynamic image.

Effect name	Setup item	Effect
STROBE	Speed: 1 to 10	Shows a series of still images from the video at the preset interval, like slowing down video frame rate.
STILL	(None)	Stops the image motion.
SOLARIZE	Level: 1 to 3	Reduces image brightness gradations to fewer levels to create a painted look.
COLORIZE	Level: 1 to 3	Changes the colors in accordance with the luminance.
MONO	(None)	Changes the image to a monotone.
SEPIA	Red: 0 to 255	Factory setting is for sepia, creating an “old picture” feel.
	Green: 0 to 255	RGB settings can be changed for other tones.
	Blue: 0 to 255	Factory settings are Red=80, Green=30, Blue=0.
NEGA	Color: Color Palette	Image changed to look like a black-and-white negative.
	Ratio: 0 to 255	White regions of image can be painted to color palette color, or image brightness changed.
CENTER IMAGE	Level 1 to 10	Surrounding region is set to Color Palette color and closer to the center image becomes gradually clear, making possible illusionary images.
	Color: Color Palette	Level changes the range of a clear region.

Preset effects can be set to USER1 to USER4

Buttons USER1 to USER4 can be set and used to instantly call frequently-used special effects (p. 67).

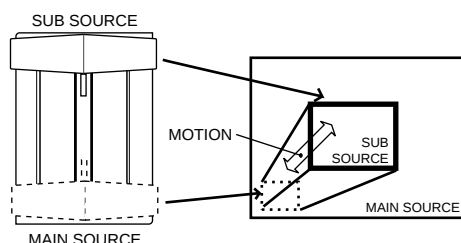
Different types of STROBE or SOLARIZE can be used, or TAP effects that change effects, such as STROBE or SOLARIZE, at intervals of tapping the [TAP] button can be available. Effects No. 22 to 32, marked with “TAP” on the display, can apply TAP effects.

TAP effects can also be controlled by start, stop and tempo messages from MIDI device, making it possible to change the effects to match the tempo (p. 80).

Display	Effect name	Effect
1:STROBE-1	STROBE 1	Strobe applied at speed 1.
2:STROBE-2	STROBE 2	Strobe applied at speed 2.
:	:	:
10:STROBE-10	STROBE 10	Strobe applied at speed 10.
11:STILL	STILL	Creates a still image.
12:SOLARI-1	SOLARIZE 1	Applies level 1 solarization.
13:SOLARI-2	SOLARIZE 2	Applies level 2 solarization.
14:SOLARI-3	SOLARIZE 3	Applies level 3 solarization.
15:COLORIZE-1	COLORIZE 1	Applies level 1 colorization.
16:COLORIZE-2	COLORIZE 2	Applies level 2 colorization.
17:COLORIZE-3	COLORIZE 3	Applies level 3 colorization.
18:MONO	MONO	Converts image to monochrome.
19:SEPIA	SEPIA	Converts image to sepia tone.
20:NEGA	NEGA	Transforms image to look like negative of black-and-white film.
21:CENTER IMG	CENTER IMAGE	Periphery is white, and image becomes gradually clearer toward center.
22:TAP-STROBE	TAP STROBE	Strobe applied at interval set for TAP function.
23:TAP-SOLARI	TAP SOLARIZE	Solarize applied at interval set for TAP function.
24:TAP-COLORIZ	TAP COLORIZE	Colorize applied at interval set for TAP function.
25:TAP-FLASH	TAP FLASH	“Flashlight” effect applied at interval set for TAP function.
26:TAP-COLOR	TAP COLOR	Sepia color changes at interval set for TAP function.
27:TAP-NEGA	TAP NEGA	Negative effect turned on/off at interval set for TAP function.
28:TAP-WIPE	TAP WIPE	Wipe changed at interval set for TAP function. Only enabled when WIPE GROUP A selected. Composite image will change according to the video fader position.
29:TAP-V SW1	TAP VIDEO SWITCH 1	MAIN SOURCE and SUB SOURCE switched at interval set for TAP function.
30:TAP-V SW2	TAP VIDEO SWITCH 2	Image switched as switching video fader between MAIN SOURCE, center and SUB SOURCE positions at interval set for TAP function.
31:TAP-AUTO	TAP AUTO	MAIN SOURCE and SUB SOURCE switched at interval set for TAP function, and speed set for AUTO.
32:TAP-PinP	TAP PinP	The Picture in Picture is moved within the MAIN SOURCE image in accordance with the specified PinP type and the interval set for TAP function.

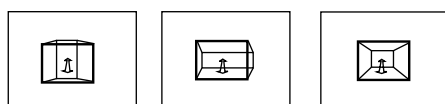
Picture in Picture Motion List

Picture in picture allows you to show a small SUB SOURCE video inset into the MAIN SOURCE video image. When [WIPE] is lit, the inset picture can be changed in size and moved while appearing or disappearing in a corner of the MAIN SOURCE image.



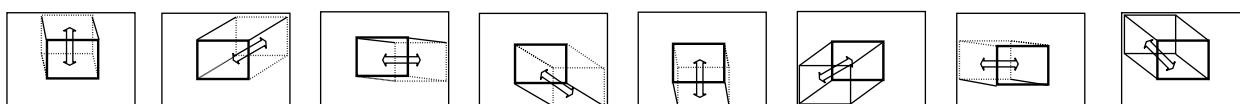
Type changes the reduction scale.

01 02 03



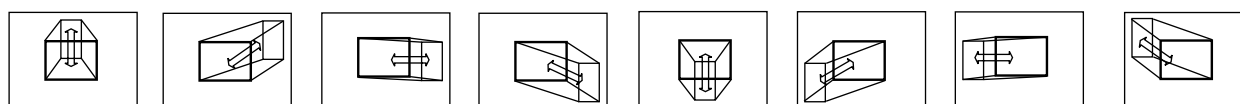
Type moves between periphery of MAIN SOURCE image and the final position while maintaining its size.

04 05 06 07 08 09 10 11



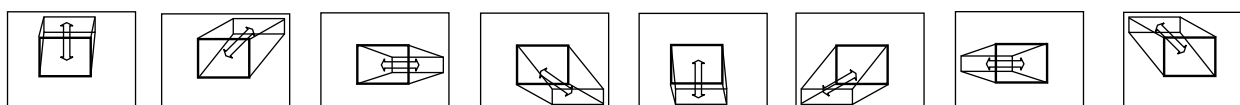
Type moves between periphery of MAIN SOURCE image and the final position while changing its size in the horizontal direction.

12 13 14 15 16 17 18 19



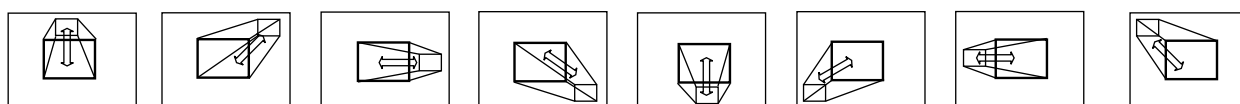
Type moves between periphery of MAIN SOURCE image and the final position while changing its size in the vertical direction.

20 21 22 23 24 25 26 27



Type moves between periphery of MAIN SOURCE image and the final position while changing its size in vertical and horizontal directions.

28 29 30 31 32 33 34 35



Functions Controllable from External MIDI Device

Connect the MIDI OUT connector on the external MIDI device to the MIDI IN connector on the rear panel of the V-5 with a MIDI cable. This will make it possible for note messages from the external MIDI device to control operations as performed by pressing buttons on the panel.

MIDI note messages can be used to control the following items. Set one of the items for each note number (see p. 81) and the V-5 will automatically execute the control set for the note number when it receives a note message from the external MIDI device.

* Control of the V-5 from external MIDI device requires that the external MIDI device and the V-5 be set to use the same MIDI channel (see p. 81).

Display	Items controllable with MIDI note messages
-----	No control information.
V-5 RESET	Returns to be in the power on initial state (see p. 17) except that [GPI/MIDI IN] is lit. All PICTURE/TITLE settings and data remain untouched.
GPI OUT SW	The GPI OUT SW outputs one GPI signal.
SUB SOURCE VIDEO EFFECTS	
STROBE ON	Turns [STROBE] ON.
STROBE OFF	Turns [STROBE] OFF.
STROBE SW	Toggles [STROBE] ON / OFF each time note message is received.
STROBE SPEED 1	[STROBE] ON at speed 1.
STROBE SPEED 2	[STROBE] ON at speed 2.
:	:
STROBE SPEED10	[STROBE] ON at speed 10.
STROBE V	Changes [STROBE] speed according to velocity of note message.
STILL ON	Turns [STILL] ON.
STILL OFF	Turns [STILL] OFF.
STILL SW	Toggles [STILL] ON / OFF each time note message is received.
SOLARIZE ON	Turns [SOLARIZE] ON.
SOLARIZE OFF	Turns [SOLARIZE] OFF.
SOLARIZE SW	Toggles [SOLARIZE] ON / OFF each time note message is received.
SOLARIZE 1	[SOLARIZE] ON at level 1.
SOLARIZE 2	[SOLARIZE] ON at level 2.
SOLARIZE 3	[SOLARIZE] ON at level 3.
SOLARIZE V	Changes [SOLARIZE] level according to velocity of note message.
COLORIZE ON	Turns [COLORIZE] ON.
COLORIZE OFF	Turns [COLORIZE] OFF.
COLORIZE SW	Toggles [COLORIZE] ON / OFF each time note message is received.
COLORIZE 1	[COLORIZE] ON at level 1.
COLORIZE 2	[COLORIZE] ON at level 2.
COLORIZE 3	[COLORIZE] ON at level 3.
COLORIZE V	Changes [COLORIZE] level according to velocity of note message.
MONO ON	Turns [MONO] ON.
MONO OFF	Turns [MONO] OFF.
MONO SW	Toggles [MONO] ON / OFF each time note message is received.
SEPIA ON	Turns [SEPIA] ON.
SEPIA OFF	Turns [SEPIA] OFF.
SEPIA SW	Toggles [SEPIA] ON / OFF each time note message is received.
SEPIA COLOR 1	[SEPIA] ON at color 1.
SEPIA COLOR 2	[SEPIA] ON at color 2.
:	:
SEPIA COLOR 9	[SEPIA] ON at color 9.
SEPIA V	Changes [SEPIA] color according to velocity of note message.
NEGA ON	Turns [NEGA] ON.
NEGA OFF	Turns [NEGA] OFF.
NEGA SW	Toggles [NEGA] ON / OFF each time note message is received.

Display	Items controllable with MIDI note messages
NEGA COLOR 1	[NEGA] ON at color 1.
NEGA COLOR 2	[NEGA] ON at color 2.
:	:
NEGA COLOR 9	[NEGA] ON at color 9.
NEGA V	Changes [NEGA] color according to velocity of note message.
CENTERIMAGE ON	Turns [CENTER IMAGE] ON.
CENTERIMAGEOFF	Turns [CENTER IMAGE] OFF.
CENTERIMAGE SW	Toggles [CENTER IMAGE] ON / OFF each time note message is received.
CENTERIMAGE 1	Turns [CENTER IMAGE] ON at color 1.
CENTERIMAGE 2	Turns [CENTER IMAGE] ON at color 2.
:	:
CENTERIMAGE 9	Turns [CENTER IMAGE] ON at color 9.
CENTERIMAGE V	Changes [CENTER IMAGE] color according to velocity of note message.
USER1 ON	Turns [USER 1] ON.
USER1 OFF	Turns [USER 1] OFF.
USER1 SW	Toggles [USER 1] ON / OFF each time note message is received.
USER2 ON	Turns [USER 2] ON.
USER2 OFF	Turns [USER 2] OFF.
USER2 SW	Toggles [USER 2] ON / OFF each time note message is received.
USER3 ON	Turns [USER 3] ON.
USER3 OFF	Turns [USER 3] OFF.
USER3 SW	Toggles [USER 3] ON / OFF each time note message is received.
USER4 ON	Turns [USER 4] ON.
USER4 OFF	Turns [USER 4] OFF.
USER4 SW	Toggles [USER 4] ON / OFF each time note message is received.
SUB SOURCE	
VIDEO1 SW	Turns [VIDEO1] ON.
VIDEO2 SW	Turns [VIDEO2] ON.
PC SW	Turns [PC] ON.
PinP ON	Turns [P in P] ON.
PinP OFF	Turns [P in P] OFF.
PinP SW	Toggles [P in P] ON / OFF each time note message is received.
PinP TYPE1	Turns [P in P] ON at type 1.
PinP TYPE2	Turns [P in P] ON at type 2.
:	:
PinP TYPE5	Turns [P in P] ON at type 5.
AUDIO CONTROL	
AUX INS ON	Turns [AUX INS] ON.
AUX INS OFF	Turns [AUX INS] OFF.
AUX INS SW	Toggles [AUX INS] ON / OFF each time note message received.
AUX MIX ON	Turns [AUX MIX] ON.
AUX MIX OFF	Turns [AUX MIX] OFF.
AUX MIX SW	Toggles [AUX MIX] ON / OFF each time note message received.
PRE START SW	Turns [PRE START] ON.
AUDIOFOLLOW ON	Turns [AUDIO FOLLOW] ON.
AUDIOFOLLOWOFF	Turns [AUDIO FOLLOW] OFF.
AUDIOFOLLOW SW	Toggles [AUDIO FOLLOW] ON / OFF each time note message received.
TRANSITION EFFECTS	
NORMAL SW	Turns [NORMAL] ON.
COLORINSERT SW	Turns [COLOR INSERT] ON.
EFFECT1 SW	Turns [EFFECT 1] ON.
EFFECT2 SW	Turns [EFFECT 2] ON.

Display	Items controllable with MIDI note messages
FADE CONTROL	
WHITE/BLACK ON	Turns [WHITE/BLACK] ON.
WHITE/BLACKOFF	Turns [WHITE/BLACK] OFF.
WHITE/BLACK SW	Toggles [WHITE/BLACK] ON / OFF each time note message received.
MAIN SW	Turns [MAIN] ON.
MAIN+SUB SW	Turns [MAIN + SUB] ON.
AUTO FADE ON	Turns [AUTO FADE] ON.
AUTO FADE OFF	Turns [AUTO FADE] OFF.
AUTO FADE SW	Toggles[AUTO FADE] ON / OFF each time note message received.
AUTOFADE SPD1	Executes [AUTO FADE] at speed 1.
AUTOFADE SPD2	Executes [AUTO FADE] at speed 2.
:	:
AUTOFADE SPD10	Executes [AUTO FADE] at speed 10.
AUTOFADE V	Changes [AUTO FADE] speed at velocity of note message.
TRANSITION	
WIPE SW	Turns [WIPE] ON.
MIX SW	Turns [MIX] ON.
AUTO SW	Turns [AUTO] ON.
AUTO SPEED1 SW	Executes [AUTO] at speed 1.
AUTO SPEED2 SW	Executes [AUTO] at speed 2.
:	:
AUTO SPEED10SW	Executes [AUTO] at speed 10.
AUTO SPEED V	Changes [AUTO] speed according to velocity of note message.
VFadeLevel0	Sets the transition ratio of MAIN:SUB to 10:0.
VFadeLevel1	Sets the transition ratio of MAIN:SUB to 9:1.
:	:
VFadeLevel10	Sets the transition ratio of MAIN:SUB to 0:10.
VFadeLevel V1	Changes the position of the video fader according to velocity of note message.
VFadeLevel V2	Changes the position of the video fader according to velocity of note message.
PICTURE TITLE	
PICT / TITLE SW	Turns [PICTURE / TITLE] ON.
TITLE IN SW	Turns [TITLE IN] ON.
TITLE OUT SW	Turns [TITLE OUT] ON.
WIPE PATTERN	
WIPE PTN1 SW	Turns WIPE PATTERN button [1] ON.
WIPE PTN2 SW	Turns WIPE PATTERN button [2] ON.
:	:
WIPE PTN8 SW	Turns WIPE PATTERN button [8] ON.
GROUP A SW	Turns WIPE GROUP button [A] ON.
GROUP B SW	Turns WIPE GROUP button [B] ON.
REVERSE ON	Turns [REVERSE] ON.
REVERSE OFF	Turns [REVERSE] OFF.
REVERSE SW	Toggles [REVERSE] ON / OFF each time note message received.
ONE-WAY ON	Turns [ONE-WAY] ON.
ONE-WAY OFF	Turns [ONE-WAY] OFF.
ONE-WAY SW	Toggles [ONE-WAY] ON / OFF each time note message received.
TITLE CAMERA/KEY	
WHITE-LUMI ON	Turns [WHITE LUMI] ON.
WHITE-LUMI OFF	Turns [WHITE LUMI] OFF.
WHITE-LUMI SW	Toggles [WHITE LUMI] ON / OFF each time note message received.
WHITE-LUMI V	Changes WHITE LUMINANCE KEY LEVEL according to velocity of note message.

Display	Items controllable with MIDI note messages
BLACK-LUMI ON	Turns [BLACK LUMI] ON.
BLACK-LUMI OFF	Turns [BLACK LUMI] OFF.
BLACK-LUMI SW	Toggles [BLACK LUMI] ON / OFF each time note message received.
BLACK-LUMI V	Changes BLACK LUMINANCE KEY LEVEL according to velocity of note message.
CHROMA ON	Turns [CHROMA] ON.
CHROMA OFF	Turns [CHROMA] OFF.
CHROMA SW	Toggles [CHROMA] ON / OFF each time note message received.
CHROMA V	Changes CHROMA KEY LEVEL according to velocity of note message.
COLOR ON	Turns [COLOR] ON.
COLOR OFF	Turns [COLOR] OFF.
COLOR SW	Toggles [COLOR] ON / OFF each time note message received.
COLOR V	Changes [COLOR] setting according to velocity of note message.
PICTURE/TITLE FILES	
MEMORY CARD SW	Turns [MEMORY CARD] ON.
FILEGROUP A SW	Turns file group [A] ON.
FILEGROUP B SW	Turns file group [B] ON.
FILEGROUP C SW	Turns file group [C] ON.
FILE 1 SW	Turns file button [1] ON.
FILE 2 SW	Turns file button [2] ON.
:	:
FILE 8 SW	Turns file button [8] ON.
FILE *A1 LOAD	Loads file A1 to V-5 unit.
FILE *A2 LOAD	Loads file A2 to V-5 unit.
:	:
FILE *A8 LOAD	Loads file A8 to V-5 unit.
FILE *B1 LOAD	Loads file B1 to V-5 unit.
FILE *B2 LOAD	Loads file B2 to V-5 unit.
:	:
FILE *B8 LOAD	Loads file B8 to V-5 unit.
FILE *C1 LOAD	Loads file C1 to V-5 unit.
FILE *C2 LOAD	Loads file C2 to V-5 unit.
:	:
FILE *C8 LOAD	Loads file C8 to V-5 unit.
FILE mA1 LOAD	Loads file A1 from currently-selected folder on memory card to V-5 unit.
FILE mA2 LOAD	Loads file A2 from currently-selected folder on memory card to V-5 unit.
:	:
FILE mA8 LOAD	Loads file A8 from currently-selected folder on memory card to V-5 unit.
FILE mB1 LOAD	Loads file B1 from currently-selected folder on memory card to V-5 unit.
FILE mB2 LOAD	Loads file B2 from currently-selected folder on memory card to V-5 unit.
:	:
FILE mB8 LOAD	Loads file B8 from currently-selected folder on memory card to V-5 unit.
FILE mC1 LOAD	Loads file C1 from currently-selected folder on memory card to V-5 unit.
FILE mC2 LOAD	Loads file C2 from currently-selected folder on memory card to V-5 unit.
:	:
FILE mC8 LOAD	Loads file C8 from currently-selected folder on memory card to V-5 unit.

Error Messages

Error messages can be grouped into the following two categories:

1. Messages which are shown and then vanish again.
2. Messages which require you to press [EXIT/NO] to resume operation (the following four messages):

“MIDI Buffer Full”

“System Error 3”

“System Error 2”

“System Error 1”

When any of the above four messages is shown, the [EXIT/NO] button will flash.

“System Error 2”	An internal system error may have occurred.
“System Error 1”	An internal system error may have occurred.
“DATA PROTECT= ON”	Data Protect has been turned on. Set Data Protect to OFF in order to write (including overwrite and delete) to internal memory.
“Int Memory Full”	Memory full (all in use). Clear unnecessary files and try again.
“File Write Error”	Write not possible for some reason. Try again.
“File Read Error”	Read (load) not possible for some reason. Try again.
“No File”	Specified file not found.
“CARD PROTECT= ON”	Memory Card Protect has been turned on. Set Memory Card Protect to OFF in order to write (including overwrite and delete) to a memory card.
“No Memory Card”	Memory card not detected. Insert a memory card if there isn't one yet, or check installation of the memory card if it is already inserted, then try again.
“Card Memory Full”	Card memory is full (all in use). Clear unnecessary files and try again, or insert a new card.
“Card Write Error”	Not possible to write to memory card for some reason. Try again.
“Card Read Error”	Not possible to read from memory card for some reason. Try again.
“Not Formatted”	Memory card not formatted. Please format memory card. Remember, formatting a card will clear all data from it.
“Format Error”	Memory card formatting may have an error. Try formatting it again.
“MIDI Buffer Full”	Unable to complete processing MIDI messages because MIDI data volume was too large for available memory. If this message is shown often, reduce the amount of data being sent.
“MIDI OffLine”	MIDI cable is disconnected or broken, preventing receipt of MIDI data.
“System Error 3”	MIDI system error may have occurred. If this message is shown often, contact the nearest Roland/EDIROL Service Center.
“System Error 4”	MIDI system error may have occurred. If this message is shown often, contact the nearest Roland/EDIROL Service Center.
“Can Not Pile”	It is impossible to pile up (overlay) two PICTURE/TITLE still image files. Piling up is only possible when the 1st file is a TITLE file. If the 1st file is a PICTURE file, then it is impossible to pile it on another file.

MIDI Implementation Chart

Function...		Transmitted	Recognized	Remarks
Basic Channel	Default Changed	X X	1-16 1-16	Memorized
Mode	Default Messages Altered	X X *****	Mode 3 Mode 3	
Note Number :	True Voice	X *****	36-96 36-96	* 1
Velocity	Note ON Note OFF	X X	O X	
After Touch	Key's Ch's	X X	X X	
Pitch Bend		X	X	
Control Change		X	X	
Prog Change	: True #	X *****	X	
System Exclusive		X	O	* 2
System Common	: Song Pos : Song Sel : Tune	X X X	O X X	* 3
System Real Time	: Clock : Commands	X X	O O	* 3 * 3
Aux Message	: All sound off : Reset all controllers : Local ON / OFF : All Notes OFF : Active Sense : Reset	X X X X X X	X X X X O X	
Notes		Only MTC quarter frame messages of the forward direction will be recognized if "GPI/MIDI IN" is ON, and "TRIGGER" is set to MTC. *1 Only Note On messages will be recognized if "GPI/MIDI IN" is ON and "TRIGGER" is set to MIDI. Any note number can be assigned a desired function. *2 Only MTC Full messages and MMC Locate messages (Device ID = 7F) will be recognized if "GPI/MIDI IN" is ON and "TRIGGER" is set to MTC. *3 Recognized if "GPI/MIDI IN" is ON and "TRIGGER" is set to MIDI.		

Mode 1 : OMNI ON, POLY
Mode 3 : OMNI OFF, POLY

Mode 2 : OMNI ON, MONO
Mode 4 : OMNI OFF, MONO

O : Yes
X : No

Specifications

V-5 NTSC/V-5 PAL: Video Mix/Title Processor

●Video Performance

Digital Conversion: 14.3 MHz, 4:1:1 (Y:B-Y:R-Y),
8-bit quantization (NTSC)
(PAL version available)
Frame Memory: 1 frame, renew sync signal
Alpha-memory: 2 frames (Wipe B, Center
Image/Extraction for Title)

●Transition

Wipe: Over 200 types
Mix
Picture in Picture: Position, Size, Type of Move, Type
of Border, Color of Border

●Sub Source Video Effects

Strobe, Still, Solarize, Colorize, Mono, Sepia, Nega,
Center Image
User 1 to 4: Effects assignable, selected from over 30
types of Preset Effects (including TAP
effects)

●Audio Mixer

Input 1, Input 2, AUX In, Mic

●Still Picture/Title Files

Capture Source: Input 1, Input 2, To PC Display Out
Digital Conversion: 4:1:1, 8-bit quantization, pixel size
756 x 485 (NTSC) or 756 x 574
(PAL)
Number of Files: Internal max. 24 files (expandable
by recommended PC CARD)

●Title Maker

Camcorder-recorded characters (including manually
entered letters) can be tinted in your choice of millions of
colors. They can also have outline and transparent
effects.

●Color Generators

Color Generator: Full Color (16.78 million colors),
black and white

●Video Inputs

S-Video (Y/C): Input 1 & 2 (4-pin minicircular
type)
Video (composite): Input 1 & 2 (RCA phono type)
To PC Display Out: VGA Input (miniature DB-15
female type for PC/AT)
Scan converter (converts VGA into
video signal) built-in
Supported resolution and format:
640 x 480 pixels, Vertical 60Hz,
Horizontal 31.5 kHz (VGA equiva-
lent) or 640 x 400 pixels, Vertical
53Hz, Horizontal 24.8kHz

●Video Outputs

S-Video (Y/C): Output (4-pin minicircular type)
Video (composite): Output & Preview Out (RCA
phono type)

●Audio Inputs

Input 1 & 2 (L, R) (RCA phono type)
AUX In (L, R) (RCA phono type)
Mic (monaural) (1/4 inch phone type)

●Audio Outputs

Output (L, R) (RCA phono type)
Phones (stereo) (φ 3.5 mm stereo miniature phone type)

●Input Level and Impedance

S-Video: Y = 1.0 Vp-p, C = 0.286 Vp-p, 75 ohms
Video (composite): 1.0 Vp-p, 75 ohms
Audio: -10 dBm to +4 dBm, 28 k ohms
Mic: -50 to -20 dBm, 1 k ohms

●Output Level and Impedance

S-Video: Y = 1.0 Vp-p, C = 0.286 Vp-p, 75 ohms
Video (composite): 1.0 Vp-p, 75 ohms
Audio: -10 dBm, 1.5 k ohms
Phones: 47 ohms

●Control Connectors

GPI In (φ 3.5 mm monaural miniature phone type)
GPI Out (φ 3.5 mm monaural miniature phone type)
MIDI In (5-pin DIN type)

* *MIDI: Musical Instrument Digital Interface*

●Expansion Slot

Memory Card Slot: for Roland PC CARD ATA series
only (for Still Picture/Title Files
and Programs storage)

●Display

16 characters, 2 lines (backlit LCD)

●Power Supply

AC 117 V, AC 230 V or AC 240 V

●Power Consumption

14 W

●Dimensions

399 (W) x 311 (D) x 104 (H) mm
15-3/4 (W) x 12-1/4 (D) x 4-1/8 (H) inches

●Weight

3.8 kg / 8 lbs 7 oz

●Accessories

Owner's Manual
Wipe Pattern List
MIDI Implementation
Power-Supply Cord

●Options

Roland PC CARD ATA PM-004 (4 M bytes)/008 (8 M
bytes)/012 (12 M bytes)/020 (20 M bytes)
Video MIDI Sync Interface SI-80S

0 dBm = 0.775 Vrms

* *In the interest of product improvement, the specifica-
tions and/or appearance of this unit are subject to
change without prior notice.*

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Information

When you need repair service, call your nearest Roland / EDIROL Service Center or authorized Roland / EDIROL distributor in your country as shown below.

Roland

ARGENTINA

Instrumentos Musicales S.A.
Florida 656 2nd Floor
Office Number 206A
Buenos Aires
ARGENTINA, CP1005
TEL: (54-1) 394-6057

BRAZIL

Roland Brasil Ltda.
R. Coronel Octaviano da Silveira
203 05522-010
Sao Paulo BRAZIL
TEL: (011) 843 9377

MEXICO

Casa Veerkamp, s.a. de c.v.
Av. Toluca No. 323 Col. Olivar de los Padres 01780 Mexico D.F.
MEXICO
TEL: (525) 668 04 80

La Casa Wagner de Guadalajara s.a. de c.v.
Av. Corona No. 202 S.J.
Guadalajara, Jalisco Mexico
C.P.44100 MEXICO
TEL: (03) 613 1414

PANAMA

Productos Superiores, S.A.
Apartado 655 - Panama 1
REP. DE PANAMA
TEL: (507) 270-2200

VENEZUELA

Musicland Digital C.A.
Av. Francisco de Miranda,
Centro Parque de Cristal, Nivel
C2 Local 20 Caracas
VENEZUELA
TEL: (02) 285 9218

NEW ZEALAND

Roland Corporation (NZ) Ltd.
97 Mt. Eden Road, Mt. Eden,
Auckland 3, NEW ZEALAND
TEL: (09) 3098 715

INDIA

Rivera Digitec (India) Pvt. Ltd.
409, Nirman Kendra,
off Dr. Edwin Moses Road,
Mumbai 400011, INDIA
TEL: (022) 498 3079

KOREA

Cosmos Corporation Service Station
261 2nd Floor Nak-Won Arcade
Jong-Ro ku, Seoul, KOREA
TEL: (02) 742 8844

TAIWAN

ROLAND TAIWAN ENTERPRISE CO., LTD.
Room 5, 9fl. No. 112 Chung Shan N.Road Sec.2, Taipei, TAIWAN, R.O.C.
TEL: (02) 561 3339

VIETNAM

Saigon Music Distributor (Tan Dinh Music)
306 Hai Ba Trung, District 1
Ho chi minh City
VIETNAM
TEL: (8) 829-9372

MALAYSIA

TMMC-Electro Sdn. Bhd.
15, Jalan 17/56,
Petaling Jaya 46400,
Selangor, MALAYSIA
TEL: (03) 756-0136

BAHRAIN

Moon Stores
Bad Al Bahrain Road,
P.O.Box 20077
State of BAHRAIN
TEL: 211 005

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Halilit P. Greenspoon & Sons Ltd.
8 Retzif Fa'aliya Hashnya St.
Tel-Aviv-Yaho ISRAEL
TEL: (03) 6823666

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AMMAN Trading Agency
Prince Mohammed St. P. O. Box
825 Amman 11118 JORDAN
TEL: (06) 4641200

KUWAIT

Easa Husain Al-Yousifi
P.O. Box 126 Safat 13002
KUWAIT
TEL: 5719499

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P.O. Box 16-5857 Gergi Zeidan St.
Chahine Building, Achrafieh
Beirut, LEBANON
TEL: (01) 335799

OMAN

OHI Electronics & Trading Co. LLC
P. O. Box 889 Muscat
Sultanate of OMAN
TEL: 959085

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Badie Studio & Stores
P.O.Box 62,
DOHA QATAR
TEL: 423554

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Al-Khobar Dharan Highway
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31952 SAUDIARABIA
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Electronics APL
P.O.Box 2154 ALKHOBAR 31952,
SAUDI ARABIA
TEL: (03) 898 2081

SYRIA

Technical Light & Sound Center
Khaled Ibn Al Walid St.
P.O.Box 13520
Damascus - SYRIA
TEL: (011) 2235 384

TURKEY

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Siraselvier Cad. Guney Ishani No.
86/6 Taksim, Istanbul TURKEY
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P.O. Box 8050DUBAI, U.A.E
TEL: (04) 360715

EGYPT

Al Fanny Trading Office
9, Ebn Hagar El Askalany Street,
Ard El Golf, Heliopolis, Cairo,
11341 EGYPT
TEL: (02) 4171828
(02) 4185531

KENYA

Musik Land Limited
P.O Box 12183 Moi Avenue
Nairobi Republic of KENYA
TEL: (2) 338 346

REUNION

Maison FO - YAM Marcel
25 Rue Jules MermanZL
Chaudron - BP79 97491
Ste Clotilde REUNION
TEL: 28 29 16

SOUTH AFRICA That Other Music Shop (PTY) Ltd.

11 Melle Street (Cnr Melle and
Juta Street)
Braamfontein 2001
Republic of SOUTH AFRICA
TEL: (011) 403 4105

Paul Bothner (PTY) Ltd.

17 Werdmuller Centre Claremont
7700
Republic of SOUTH AFRICA
TEL: (021) 64 4030

AUSTRIA

E. Dematte & Co.
Neu-Rum Siemens-Strasse 4
6063 Innsbruck AUSTRIA
TEL: (0512) 26 44 260

BELGIUM/HOLLAND/ LUXEMBOURG

Roland Benelux N. V.
Houtstraat 1 B-2260 Oevel-
Westerlo BELGIUM
TEL: (014) 575811

BELORUSSIA

TUSHE
UL. Rabkorovskaya 17
220001 MINSK
TEL: (0172) 764-911

CYPRUS

Radex Sound Equipment Ltd.
17 Diagorou St., P.O.Box 2046,
Nicosia CYPRUS
TEL: (02) 453 426

DENMARK

Roland Scandinavia A/S
Langebrogade 6 Post Box 1937
DK-1023 Copenhagen K.
DENMARK
TEL: 32 95 3111

FRANCE

Roland France SA
4, Rue Paul Henri SPAAK
Parc de l'Esplanade F 77 462
St. Thibault Lagny Cedex
FRANCE
TEL: 01 600 73 500

FINLAND

Roland Scandinavia As, Filial Finland
Lauttasaarentie 54 B
Fin-00201 Helsinki, FINLAND
TEL: (9) 682 4020

GERMANY

Roland Elektronische Musikinstrumente Handelsgesellschaft mbH.
Oststrasse 96, 22844 Norderstedt,
GERMANY
TEL: (040) 52 60090

GREECE

V. Dimitriadis & Co. Ltd.
20, Alexandras St. & Bouboulinas
54 St. 106 82 Athens, GREECE
TEL: (01) 8232415

HUNGARY

Intermusica Ltd.
Warehouse Area 'DEPO' Pf.83
H-2046 Torokbalint, HUNGARY
TEL: (23) 511011

IRELAND

The Dublin Service Centre Audio Maintenance Limited
11 Brunswick Place Dublin 2
Republic of IRELAND
TEL: (01) 677322

ITALY

Roland Italy S. p. A.
Viale delle Industrie, 8
20020 Arese Milano, ITALY
TEL: (02) 937-78300

NORWAY

Roland Scandinavia Avd. Kontor Norge
Lilleakerveien 2 Postboks 95
Lilleaker N-0216 Oslo
NORWAY
TEL: 273 0074

POLAND

P. P. H. Brzostowicz Marian
UL. Blokowa 32, 03624 Warszawa
POLAND
TEL: (022) 679 44 19

PORTUGAL

Tecnologias Musica e Audio, Roland Portugal, S.A.
RUA SANTA CATARINA
131 - 4000 PORT-PORTUGAL
TEL: (02) 208 44 56

RUSSIA

Slami Music Company
Sadojava-Triumfalnaja st., 16
103006 Moscow, RUSSIA
TEL: 095 209 2193

SPAIN

Roland Electronics de España, S. A.
Calle Bolivia 239 08020 Barcelona,
SPAIN
TEL: (93) 308 1000

SWEDEN

Roland Scandinavia A/S SWEDISH SALES OFFICE
Danvik Center 28, 2 tr.
S-131 30 Nacka SWEDEN
TEL: (08) 702 0020

SWITZERLAND

Roland (Switzerland) AG Musitronic AG
Gerberstrasse 5, CH-4410 Liestal,
SWITZERLAND
TEL: (061) 921 1615

UKRAINE

TIC-TAC
Mira Str. 19/108
P.O.Box 180
295400 Munkachevo, UKRAINE
TEL: (03131) 414-40

UNITED KINGDOM

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Atlantic Close, Swansea
Enterprise Park SWANSEA
West Glamorgan SA7 9FJ,
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TEL: (01792) 700139

EDIROL

U. S. A. / CANADA

EDIROL Corporation North America
345 - 4th St.
San Francisco, CA 94107
U. S. A.
TEL: (415) 777 9884

AUSTRALIA

EDIROL Australia Pty. Ltd.
72 Central Avenue
Oak Flats NSW 2529
AUSTRALIA
TEL: (02) 4258 9040

EUROPE

EDIROL (Europe) Ltd.
500 Chiswick High Road,
London W4 5RG
U. K.
TEL: +44 (0) 181 956 2224

As of August 25, 1998 (DTV)



For EU Countries

This product complies with the requirements of European Directives EMC 89/336/EEC and LVD 73/23/EEC.

For the USA

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.
This equipment requires shielded interface cables in order to meet FCC class B Limit.

For Canada

NOTICE

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

AVIS

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

